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CSAT DEMONSTRATION: EVALUATION OF JOB CORPS DRUG TREATMENT ENRICHMENT PROJECT

Contract No.: 270-91-0015

Final Report

Caliber Associates in conjunction with Battelle Human Affairs Research Center and Research Triangle Institute

Department of Health and Human Services Substance Abuse Mental Health Services Administration Center for Substance Abuse Treatment

September 1996



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September 30, 1996

Mr. George Kanuck Center for Substance Abuse Treatment Program Evaluation Branch 5515 Security Lane, Suite 840 Rockville, MD 20857

Dear Mr. Kanuck:

Caliber Associates, Battelle Human Affairs Research Center, and Research Triangle Institute are pleased to present the Final Report for the Evaluation of the Job Corps Drug Treatment Enrichment Project (DTEP) Demonstration. Five copies of the report are included for your review.

The CSAT Drug Treatment Enrichment Project was designed to include important interventions for adolescents who are at high risk for substance abuse: DTEP was, however, imperfectly implemented-being subjected to "real world" constraints and anomalies. Also, during the DTEP demonstration, young people entering the Job Corps program were not seeking help forsubstance use. Rather, these youth were pursuing job training, and their DTEP participation was just another requirement of the Job Corps program. This perspective distinguishes the Job Corps students from people who actively pursue substance abuse treatment and suggests that necessary substance abuse treatment pre-dispositions (e.g., attitudes and motivation) were lacking.

Despite these barriers, DTEP demonstrated effectiveness in its primary goal of reduction of drug use. DTEP students overall had a statistically significant reduced use of marijuana and other drugs when compared to the control group. DTEP, however, did not appear to reduce alcohol misuse. Further, the analyses show that DTEP made a substantial contribution to the mental health of its participants. DTEP also appears to have reduced drug sale-related criminal activity.

Sincerely,

Patricia Devine Project Director

Patricia Duine

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EXECUTIVE SUMMARY

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The Center for Substance Abuse Treatment (CSAT) sponsored a four-year drug intervention demonstration in conjunction with the U.S. Department of Labor, Office of Job Corps. Caliber Associates, with Battelle Human Affairs Research Center and Research Triangle Institute, was awarded the contract to evaluate the Drug Treatment Enrichment Project (DTEP) demonstration effort. This executive summary highlights the findings from the evaluation study's Final Report.

1. **INTRODUCTION**

Early in 1991, CSAT, in the Substance Abuse and Mental Health Services Administration (SAMHSA), recognized that the Job Corps program in the Department of Labor presented an opportunity for a drug treatment demonstration project. The unique characteristics of Job Corps-the fact that high-risk young people attend a residential employment and training program for an average of seven months-appeared to provide a controlled environment in which adolescent drug intervention services could be tested. At the same time, the Office of Job Corps had mounting evidence that drug use among Job Corps students was at least as prevalent as use among the adolescent population at large. Therefore, the idea of a substance abuse intervention demonstration within a sample of Job Corps centers appealed to both CSAT and the National Office of Job Corps. The advantages of the demonstration for Job Corps include the ability to provide an enhanced intervention service and the opportunity to gain information on the effectiveness of the enhanced services for curbing substance abuse among the student population. For CSAT, the Job Corps demonstration adds an important adolescent program evaluation to the complement of CSAT treatment programs evaluation and research.

The DTEP demonstration involved implementation of DTEP in four experimental Job Corps centers, which were matched with four control centers that are providing the standard Job Corps Alcohol and Other Drugs of Abuse (AODA) program. The demonstration was structured so that the efficacy of enriched substance abuse intervention services could be compared with the standard Job Corps AODA services.

The five-year DTEP evaluation consisted of a quantitative assessment of student outcomes while on center as well as post-Job Corps, a qualitative assessment of program implementation, and an assessment of DTEP and AODA operations across the participating centers. Findings from the implementation and operational assessment as well as the analysis of within-program outcomes were presented in the First, Second, and Third Annual Reports. The

focus of the Final Report is on the Job Corps student outcomes 12 months after leaving Job c o r p s .

The Final Report contains four main sections. Chapter I presents an introduction to CSAT, the Job Corps program, and the DTEP demonstration. Chapter II provides a summary description of DTEP and AODA. Student profiles at intake are included to provide a fuller context for the statistical analysis. Chapter III, the main section, provides the analyses of the DTEP and AODA student follow-up data. Chapters II and III are summarized below. Chapter IV presents the conclusions and recommendations.

2. COMPARISON OF DTEP AND AODA PROGRAMS AND STUDENTS

In the DTEP evaluation, DTEP students who received enriched substance abuse intervention services are compared with AODA students who received the standard (non-enriched) substance abuse services currently provided by the Job Corps centers. To provide context for these analyses, the following sections describe the DTEP and AODA programs and highlight the key differences between the students who participated in the programs.

2.1 Comparison of DTEP and AODA Programs

Job Corps centers have a policy of no alcohol use on center and no illicit drug use either on or off the center. Both the DTEP and AODA programs support this policy toward substance abuse. At each Job Corps center, a student is tested for drugs (other than alcohol) within 48 hours of entering, while alcohol testing generally occurs only as a result of suspicion that the student is under the influence of alcohol.

Basic components of the AODA program are biochemical testing interventions; counseling on behavioral consequences of continuing to use drugs, four group sessions emphasizing the self-help process of staying **free** of drugs, and a quarterly follow-up session. An AODA specialist is assigned to students who test positive to evaluate their drug risk, design biochemical intervention plans, and provide group sessions and aftercare services.

By comparison, DTEP includes intervention plans based on in-depth assessment of drug and alcohol abuse; individually tailored intervention; and **aftercare** plans that include biochemical testing, individual and group counseling, educational assistance, life skills classes and recreational activities, and case management by a team. The DTEP team has an activities specialist, a substance specialist, and an education specialist who coordinate a student's care and

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provide specialized services in their areas of expertise. The greater resources result in DTEP offerings that are more routinized and/or more intensive than in AODA.

Operational issues and problems that were identified through on-site data collection during the first and second years of operation were updated, to the extent possible, with information collected during telephone contacts with the DTEP teams and control center Assessment Specialists prior to the termination of DTEP in August 1995. The following issues were identified in terms of their possible effects on the outcome of the evaluation.

For the experimental centers, DTEP and AODA continued to function as separate entities at the experimental centers during the first phases of DTEP, resulting in confusion among center staff, creation of operational inefficiencies, and DTEP program inconsistencies among the four experimental centers. Isolation of DTEP within the Job Corps centers was also noted during the first phases of the program. During the life of the project, the DTEP team moved from reporting to the Center Director, where management support was variable, to relocation within the Health Services Department. Difficulties in recruiting qualified staff and staff turnover were problems both during and at the end of the project.

Not all AODA programs functioned as "regular" AODA programs. At least one AODA program functioned much like its comparison DTEP program, providing more individual counseling and other services.

2.2 **Job Corps Center Student Profiles**

The following sections summarize data on the Job Corps youth found in the Third Annual Report. Descriptions of the youth who entered the program provide a basis for analysis of the outcomes to be measured.

Characteristics of All Entering Job Corps Students

A total of **6,5** 10 Individual Assessment Profile-Intake (IAP-I) forms were collected at the experimental (56%) and control (44%) centers. The majority of entering students were male (62%), African American (59%), and between the ages of 18 and 20 years (just under one-half). While the large majority of students had completed the ninth grade or more, only about one-third of the youth over 18 had completed high school. Around one-half of the entering students reported having been involved in the commission of a crime, while less than one-third reported having been arrested or booked. Although the most frequently reported crimes were status offenses, around one-third (36%) of the students reported having sold drugs and 13 percent

reported having been arrested and booked for selling drugs. When asked about criminal activity during the 12 months prior to Job Corps, however, only 9 percent of the youth reported having sold drugs during that period.

Jobs Corps Student Substance Use

Most students entering Job Corps reported previous use or at least experimentation of some form of substance abuse; 75 percent had consumed alcoholic beverages, 57 percent had used a drug, and over 40 percent smoked cigarettes. The average age of first drug use was between 14 and 15 years of age. Drug users tended to be younger (63% were under 1 8), male (66%), and white (66%) or Hispanic (66%).

Risk factor analysis yielded results indicating that smoking and familial substance use (mother's drug use, father's alcohol use) were high-risk factors **for** student drug use. Also associated with a higher likelihood of drug use were gender (male), ethnicity (white and Hispanic), crimixial activity, exclusion from the home, and school suspension or expulsion. Students who were drug users were more likely to be sexually active than students who were not drug users.

Comparison of DTEP and AODA Participant Characteristics

DTEP and AODA students are very similar on gender, family, and education factors, but different for age and ethnicity. The age (AODA tend to be younger) and ethnicity (DTEP tends to have more white and Hispanic) differences between DTEP and AODA reflect the differences between the populations of the centers from which the groups are drawn. On many of the risk factors noted above DTEP and AODA students are similar with the exception that proportionately more DTEP (16%) than AODA (11%) students report being placed in a different home by authorities.

When comparing drug use patterns, however, DTEP students differ significantly from AODA students. More DTEP students (54%) drank alcoholic beverages than AODA (37%) students. Significantly more DTEP (2 1%) than AODA (15%) students reported using two or more different drugs in the year prior to Job Corps. Proportionately more DTEP (23%) than AODA (16%) students also reported using a drug other than marijuana. Significantly more DTEP (35%) than AODA (29%) students reported having sold drugs. Significantly more DTEP (77%) than AODA (67%) students reported having been involved in the commission of a crime.

When compared with non-program students both DTEP and AODA students reported higher levels of criminal activity, including committing a criminal act, being a member of a gang, and having sold drugs.

3. EVALUATION OF DTEP FOR REDUCING SUBSTANCE USE AND ABUSE

This report presents findings of the Job Corps drug treatment enhancement program (DTEP). The analyses examine outcomes specifically related to alcohol and other drug use/abuse and explore additional indirect effects of DTEP on employment and welfare use, length of stay in Job Corps, psychological assessments, and criminal activity. The emphasis in these findings is on substance use and abuse outcomes and the effect of DTEP compared to the original Job Corps AODA program in reducing substance use/abuse among youth enrolled.

3.1 Results for Alcohol and Drug Abuse/Use Outcomes

Findings from all drug and alcohol outcomes may be summarized as follows:

- DTEP reduces drug use. At conventional levels of statistical significance, the adjusted effects of DTEP are to reduce the odds of the use of marijuana and crack/cocaine. Approximately **91 percent** of DTEP and AODA youth report using marijuana **12** months prior to entering Job Corps and approximately 8 percent report using crack/cocaine. Both DTEP and AODA youth report a significant decline in marijuana use post-Job Corps but the decline in use by DTEP youth is significantly larger by approximately 6 percent (62% for AODA and 56% for DTEP). For crack/cocaine the decline in crack/cocaine use indicates that AODA students who used crack/cocaine before Job Corps are twice as likely as DTEP students to use crack/cocaine after Job Corps.
- DTEP lowers the extensive use of drugs. DTEP students are **significantly** less likely to engage in moderate to extensive use of marijuana than comparable AODA students. Only 41 percent of DTEP students report weekly to daily use of marijuana after Job Corps as compared to 50 percent of AODA students. When extensive drug use is measured by extensive use of marijuana or use of other **non-marijuana** drugs the standardized percentage of DTEP students in this category is 17 percent while the standardized percentage of AODA students is 23 percent (a significant difference of 6%).
- DTEP appears to have no affect on binge' alcohol drinking between DTEP and AODA youth after Job Corps.

Other findings include:

- Prior selling of drugs is positively related to continued use of crack/cocaine.
- Age is significantly positively related to binge drinking after Job Corps. Older students are more like to report binge drinking when controlling for other factors.
- Youth who show higher levels of mental stress at entry into Job Corps and who receive DTEP services report lower post-termination binge drinking.
- Having been employed prior to Job Corps is associated with lower levels and frequency of use of marijuana and crack/cocaine after Job Corps.

3.2 Effects of DTEP on Mental Health Problems/Psychological Well-Being

DTEP provided a comprehensive approach to youths' drug problems, which included individual counseling, life skills development, and guided social and recreational activities. The AODA program was not designed to provide these additional levels of support. Because mental health status and substance use are often associated, it is of interest to investigate changes in the mental health status of the youth and the effects of DTEP on that status. The following were found:

- At entry into Job Corps, 26 percent of all DTEP and AODA students showed mental health problems and 12 percent showed clinically significant mental health problems as measured by the Brief Symptom Inventory (BSI).
- DTEP lowered the proportion of students with mental health problems. The percentage of DTEP students with clinically significant mental health problems is lower (8.5%) than the percent of AODA students with mental health problems after Job Corps. In addition, a DTEP, student is only one-half as likely to have a clinically significant mental health problem one year after Job Corps.

3.3 Effects of DTEP on Criminal Activities

No substantial effects of DTEP were observed relative to criminal behavior after Job Corps, although small but significant effects were noted relative to the sale of drugs. DTEP students are less likely **to** report selling drugs after Job Corps, which may reflect their reduced involvement in the drug culture.

3.4 Effects of DTEP on Placement, Employment, and Earnings

The anticipated effects of DTEP on these outcomes are indirect and most likely weak, since such outcomes are related to a number of facets of Job Corps and are not specific outcomes addressed by DTEP. To the extent that DTEP reduces negative drug and alcohol outcomes, positive effects may be observed. No differences are observed between DTEP and AODA students on placement except when mental health status at Job Corps entry is included in the equation. DTEP students who had mental health problems at the time of entry into Job Corps have a significantly higher likelihood of placement than comparable AODA students. DTEP and AODA students show no differences in reported employment or earnings after Job Corps.

3.5 Effects of DTEP on Use of Welfare

As with other non-drug outcomes, it is expected that DTEP may have an indirect effect on the use of welfare. To the extent that DTEP lowers drug use and improves mental health status, personal, and social skills, a reduction in the use of welfare may be observed. DTEP students show substantial and significant differences in reported use of general assistance, food stamps, and Medicaid after Job Corps than do AODA students (33% of DTEP versus 42% of AODA students).

3.6 Effects of DTEP on Duration of Stay and Educational and Vocational Outcomes

An important predictor of educational and vocational achievement is the duration of stay,, which is also addressed. Because the data are available, the analyses are conducted on all enrollees rather than being restricted to the follow-up students. The following findings were noted (see Appendix F):

- While DTEP students have significantly lower rates of dropout during the second month of stay in Job Corps, the overall impact between rates of dropout of DTEP and AODA students is small and not statistically significant. Students who report extensive drug use prior to Job Corps have significantly lower durations of stay in Job Corps.
- The difference between the rates of GED attainment or high school diploma attainment for DTEP and AODA is small and not significant.
- The difference between DTEP and AODA students in rate of completion of vocational training is not significant.

4. CONCLUSIONS AND RECOMMENDATIONS

The following sections summarize the conclusions and recommendations based on study findings.

4.1 Conclusions Related to DTEP Operations

The organizational location of DTEP within the each Job Corps center's operations continued to be a problem. DTEP teams were organizationally relocated to Health Services but issues continued to persist, and at two centers, DTEP staff reported a diminishing sense of management support for the program. High staff turnover and long periods for staff replacement occurred. Full integration into center operations remained a problem throughout the life of the project.

4.2 **Program Operations and Cost**

Based on participation the average resource per program participant for DTEP was twice as resource intensive as for AODA. These findings, however, are based on limited cost data.

4.3 Conclusions Related to the Validity and Reliability of the Evaluation

Overall, the validity and reliability of the DTEP evaluation processes and data were relatively high. Some limitations were observed. The results are likely to be generalizable to Job Corps centers run by private contractors because of differences in student characteristics. Differences in study enrollment rate indicate that the results may also not be generalizable to students who need a bilingual program. Only data from the IAP-I and SPAMIS are available for all students in the study, IAP-T data tend to be available for longer-term students and IAP-F data appear to be more representative of shorter-term students.

4.4 Conclusions Based on Final Analyses

The following conclusions are based on analyses of the IAP-F and SPAMIS data:

• Because longer-term stayers (eligible for follow-up) who had less than a year post-Job Corps were not interviewed due to time constraints, it is more likely that the IAP-F results are skewed towards the shorter-term stayers. It is expected that DTEP benefits would have been more manifest in the longer-term stayers, therefore, the inferences **from** the follow-up survey are likely to underestimate the effects of DTEP.

DTEP reduced marijuana and crack/cocaine use-post-Job Corps significantly more than did AODA. In addition, DTEP students were less likely to engage in moderate to extensive use of marijuana or to use other drugs. No differences were found for alcohol misuse.

DTEP improved students' mental health. DTEP students were one-half as likely as AODA students to exhibit clinically significant mental health problems (based on the BSI) one year after Job Corps termination.

DTEP students were less likely to report selling or helping to sell drugs after Job Corps. No differences between DTEP and AODA were found for other criminal involvement.

Although DTEP would not be expected to have a direct impact on job placement, wages or total earnings, evidence that DTEP made any impact was lacking except when a student had a drug and mental health problem. DTEP students with mental health problems had a significantly higher placement rate after Job Corps.

• When effects on duration of stay, educational, and vocational gains during Job Corps were examined, DTEP appeared to have no significant positive effect on these factors. During the second month of stay DTEP students dropped out less often but the effect did not translate into longer overall stays.

4.5 Recommendation Related to DTEP Integration

In a study where a specialized program is only a small part of a larger program and the goals of the two may not always be perceived as coinciding, it may be difficult to successfully integrate the two. Throughout the life of the project, integration of DTEP into the center milieu was a difficult and continuing process. DTEP staff were moved from one department to another, encountered attitudes of other center staff that their mission did not coincide with the mission of job training, and felt a lack of support from center management for the program. Full integration needs to occur such that these types of issues are resolved or ameliorated to the extent possible, otherwise, the success of the project is limited.

4.6 Recommendation Related to Mental Health and Drug Use/Abuse

The success of DTEP in helping youth who had both drug use/abuse and mental health problems was the most significant difference between DTEP and AODA and demonstrated a need that is not met by the current AODA program. An enhancement of AODA to meet these needs is recommended.

4.7 Recommendation Related to Low Response Rate of IAP-Ts

Throughout the life of the project the response rate for IAP-T interviews was low. One of the problems related to the lack of access to students who were "checking out" of Job Corps. Although attempts were made by center staff and the study's assessment specialists to close the loops, the problem persisted. Because motivations and attitudes have been demonstrated to be important to making behavioral changes, it is recommended that mechanisms be added in future studies to ensure that these types of data will be adequately collected and time be allowed to ensure that the mechanisms are working properly.

4.8 Recommendations Related to Loss of Longer-Term Stayers

Problems with DTEP implementation and time needed to correct the problems delayed the implementation of data collection for the follow-up. The result was that data collection schedules were adjusted but had limited flexibility. One recommendation for future studies in this type of environment is to allow a longer "shake-down" period on the front-end. Another recommendation is to provide more flexibility at the back-end should schedules need to be revised for legitimate evaluation reasons.

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	I. INTRODUCTION	

I. INTRODUCTION

The focus of the Final Report is on the preliminary outcomes of the Drug Treatment Enrichment Project (DTEP) demonstration. This report describes Job Corps students included in the demonstration and findings on the impact of DTEP on substance use, criminal behavior, job placement and employment, and psychological well-being among these students. The impact of DTEP on learning gains, high school/GED attainment and vocational completion is also reviewed. The analyses reported here are derived from data collected from Job Corps student interviews, monthly summaries of DTEP and AODA activities, and the Job Corps national databases on student performance. The purpose of this chapter is to provide information on the Federal agency sponsorship and management of DTEP followed by a brief description of the evaluation design. The chapter concludes with an overview of the purpose and organization of this report.

1. FEDERAL AGENCY SPONSORSHIP AND MANAGEMENT

The Center for Substance Abuse Treatment (CSAT) initiated an enriched drug treatment demonstration project in cooperation with the U.S. Department of Labor (DOL) Office of Job Corps. The purpose of this section is to provide information on these two Federal agencies, as background to the demonstration project.

1.1 Center for Substance Abuse Treatment (CSAT) - Sponsorship and Coordination of National Drug Treatment Research

The Alcohol, Drug Abuse and Mental Health Administration (ADAMHA) Reorganization Act of 1992 aimed to strengthen prevention and treatment services by expanding support to state and local agencies and linking primary health, mental health, and substance abuse treatment at the community level. The ADAMHA reorganization created the Substance Abuse and Mental Health Services Administration (SAMHSA), which, in turn, comprises three "centers," including CSAT. CSAT leads the Federal effort to enhance and expand the nation's treatment infrastructure through (1) sponsorship of substance abuse treatment demonstration projects, (2) research on the effectiveness of the demonstrations, and (3) generation of new information and knowledge to the substance abuse treatment community.

1.2 The Job Corps Program

The legislation authorizing the Job Corps program indicates "the purpose of Job Corps is to assist young individuals who need and can benefit from an unusually intensive program operated in a group setting to become more responsible, employable and productive citizens."

Job Corps was built upon a comprehensive, competency-based service philosophy and delivery system. The emphasis on residential treatment reflects the program's concern with young people's "disruptive home life, or other disorienting conditions," which must be overcome to achieve self-sufficiency. The Job Corps program includes assessment, basic education, vocational skills training, and work experience. This approach is complemented by health education, medical services, individual and group counseling, allowance payments, and structured residential and recreation programs. Today there are 107 Job Corps centers nationwide, which serve from 149 to over 2,000 students. Job Corps centers enroll approximately 60,000 young people annually.

Approximately two-thirds of the Job Corps students are male, over one-half are African American, and the average age is approximately 19 years. The majority (60%) come from urban areas and almost 40 percent come from families on public assistance. More than 80 percent are high school dropouts, 75 percent read at an eighth grade level or below, and 75 percent have never been employed full-time. As a group, Job Corps students represent a population typically considered, on the basis of socioeconomic and demographic factors, to be at high risk for illegal drug use and abuse.

1.3 The CSAT/Job Corps Drug Treatment Enrichment Partnership

Early in 1991, CSAT recognized that the Job Corps program presented an opportunity for a drug treatment demonstration project. The unique characteristics of Job Corps-namely, the fact that high-risk young people attend a <u>residential</u> employment and training program for an average of seven months-appeared to provide a controlled environment in which adolescent drug intervention services could be tested.

Meanwhile, the National **Office** of Job Corps was collecting information, through its own demonstration, on the prevalence of illicit substance use among students entering Job Corps. There was a growing recognition that drug use among Job Corps students was at least as prevailing, if not in excess of, the adolescent population at large. Given that the Job Corps program, like all publicly funded initiatives, is continually confronted with budgetary constraints, there were no additional resources with which to address students' substance-using problems.

Therefore, the idea to develop, implement, and evaluate a substance abuse intervention demonstration within a sample of Job Corps centers appealed to both CSAT and the National Office of Job Corps. For CSAT, the Job Corps demonstration provided a controlled adolescent experiment that adds to knowledge gained from CSAT substance abuse treatment demonstrations targeted for other population groups. The advantages of the demonstration for Job Corps

included (1) the addition of an enriched student service and (2) the opportunity to gain information as to the value of using enriched drug intervention services to curb Job Corps student substance abuse.

2. OVERVIEW OF THE DRUG TREATMENT ENRICHMENT PROJECT DEMONSTRATION

The purpose of the evaluation is to provide CSAT and the National Office of Job Corps with information about the costs and benefits of using enriched drug intervention services within Job Corps centers. The demonstration has been structured so that the efficacy of the enriched drug intervention services can be compared with the less intensive interventions currently used in Job Corps centers.

The DTEP demonstration design involved implementation of DTEP in four experimental Job Corps centers matched with four control centers that provided the standard Job Corps Alcohol and Other Drugs of Abuse (AODA) program. The primary objectives for the DTEP evaluation were to:

- Identify both the immediate effects of DTEP on students in Job Corps and the
 longer-term impacts once students leave Job Corps
- Specify the DTEP factors that affect student outcomes, as well as those factors associated with efficient implementation and operations.

Brief summaries of the designs for the **AODA** program, DTEP, and the evaluation are provided below.

2.1 Alcohol and Other Drugs of Abuse (AODA) Program Design

During the demonstration period (1992 -1994), Job Corps AODA policies prohibited the possession and/or use of alcohol or illicit drugs either on or off center and required that all centers implement an AODA program. The AODA program, organizationally located within the Health Services Department, consisted of four components: biochemical testing, intake assessment, intervention, and education. Biochemical testing was mandated for all students entering Job Corps within 48 hours of arrival and for students exhibiting behaviors that suggested possible substance use. A full-time, certified AODA specialist conducted an intake assessment for those students who-tested positive for substance use and initiated **AODA** intervention for those students identified as needing services. A written intervention plan was developed for each participating student, which specified repeat testing, the consequences of

repeated positive test results, a behavior agreement between Job Corps and the student, and student attendance at four, one-hour sessions on the self-help process.

2.2 Drug Treatment Enrichment Project (DTEP) Design

As an AODA enhancement, DTEP provided five new program personnel: an Activities Specialist/Project Coordinator, a Substance Specialist, an Education Specialist, an Assessment Specialist, and a Project Assistant. Within the first 10 working days on center, the **Assessment Specialist** conducted a comprehensive individual assessment profile (IAP) interview with each new student, and if the student had a positive biochemical test and/or positive drug/alcohol history, the Assessment Specialist alerted the **Substance Specialist** who reviewed the file, determined the student's need for services, and developed an intervention plan and behavioral agreement. The Substance Specialist provided intensive individual and/or group counseling to each DTEP student, which included 30 minutes to an hour per week for a minimum of three months.

The Education Specialist conducted an assessment through a review of the student's reading entry scores on standardized assessment tests and then provided individual and group learning sessions for math, reading, and GED-related requirements. Similarly, the Activities Specialist, responsible for providing DTEP oversight and staff supervision, was also responsible for two discrete program interventions, including a program of special activities and Life Skills Seminars, which were aimed at improving student self-concept and self-efficacy.

2.3 **DTEP Evaluation Design**

The DTEP evaluation *consists* of a quantitative assessment of student outcomes while on center as well as outcomes post-Job Corps, and a qualitative assessment of program implementation and operations activities across the participating centers. To identify the immediate impact of DTEP services on Job Corps students, this evaluation examines students' self-reported changes in substance usage, employment, and criminality along with objective measures of academic/vocational performance and substance use while students are still on center. Follow-up data measuring standard Job Corps outcomes coupled with indicators of substance abuse and criminal behaviors were gathered one year after Job Corps termination to determine the enduring. impact of DTEP participation. Over the course of the demonstration, student performance was tracked at three points in time; Job Corps student record data (e.g., TABE scores, GED test results) were also captured for comparison.

In addition, a two-phased qualitative assessment of program, operations was conducted across centers. An initial round of site visits, which culminated in the First Annual Report, delivered to CSAT in December 1992, was conducted to gain a thorough understanding of program activities and to support a description of program components at each center. A second round of site visits was conducted to identify unresolved implementation problems, to describe program adjustments or modifications including staff changes, to assess organizational and administrative issues both within the DTEP program and between DTEP and other center activities, and to gather program operations cost data. Findings from the second round of site visits were presented in the Second Annual Report, delivered to CSAT in November 1993.

3. PURPOSE AND STRUCTURE OF THE FINAL REPORT

The primary purpose of the Final Report is to provide findings from the analyses of the post-Job Corps outcomes. The Final Report contains summary descriptions of the DTEP and AODA program designs, program operations, and other findings from the Third Annual Report to enable the reader to understand and interpret the student data that are presented. Similar to the previous Annual Reports, the Final Report is designed to "stand alone" and to be read and understood by lay audiences.

Following the introduction, Chapter II presents a profile of the demonstration components including descriptions of the DTEP and AODA operations and the DTEP and AODA students. The descriptions and analyses within this chapter summarize the program descriptions, operational assessments, and student baseline data presented in the Third Annual Report. New information is also presented on the specific services provided by DTEP and AODA. The remainder of the report focuses on the analyses of the student outcome data collected the 12 month follow-up.

Appendices to this report present a description of the methodology (Appendix A), a discussion of validity and reliability issues (Appendix B), general analysis strategy for the evaluation of DTEP (Appendix C), description of the analysis sample (Appendix D), detailed descriptions of the analyses models (Appendix E), and analyses of all **DTEP/AODA** enrollees for educational and vocational outcomes (Appendix F).

II.	COMPA	ARISON (OF DTEP	AND A	AODA	PROGRAM	AND	STUDEN	TS

II. COMPARISON OF DTEP AND AODA PROGRAM AND STUDENTS

The DTEP evaluation is predicated on a comparison of enriched substance abuse intervention services and students at the experimental centers with a group of control (non-enriched services) centers and students. The purpose of this chapter is to lay the foundation for these comparisons with a description of DTEP and AODA (Section 1) followed by a description of the Job Corps students included in the demonstration (Section 2).

1. COMPARISON OF AODA AND DTEP¹

The DTEP evaluation design includes a comparison of the Job Corps centers offering DTEP with Job Corps centers offering AODA services only. The purpose of this section is to compare and contrast the substance intervention services at the experimental and control centers so as to identify DTEP and AODA differences and to provide programmatic context for a discussion of program operational issues that may have affected student outcomes.

1.1 Alcohol and Other Drugs of Abuse (AODA)

Since its inception, the Job Corps has had policies and procedures designed to control the use of substances among its student population. The early policies focused on preventing access to alcohol and illicit substances through the strict enforcement of center operating procedures. The Alcohol and Other Drugs of Abuse (AODA) encompasses both a policy and a program. The AODA policy states that the possession and use of alcohol and drugs on center is prohibited and extends the ban to the possession and/or use of illicit drugs off center. The AODA program was designed to assist centers. in achieving these goals. A brief summary of AODA is presented in Exhibit II- 1, following this page.

1.2 Drug Treatment Enrichment Program (DTEP)

DTEP includes (1) a comprehensive intake assessment of each entering Job Corps student, (2) a determination of need for substance abuse interventions, (3) development and management of a "treatment plan" through case management methods, and (4) provision of intensive counseling services as well as remedial education, life skills, and recreation support. A summary of DTEP interventions by DTEP Specialist is presented in Exhibit 11-2, following Exhibit II- 1.

¹ Material contained in this section was extracted from the Third Annual Report, Chapter II.

EXHIBIT II-I ALĈOHOL AND OTHER DRUGS OF ABUSE (AODA) PROGRAM

POLICY

- Alcohol/drug possession/use on center is prohibited
- · Drug possession/use off center is prohibited
- · Centers will comply with Drug-Free Workplace Act of 1988
- Student participation is mandatory
- · Biochemical testing requirements:

All new students within 48 hours of entry Students suspected of using alcohol&rugs Intervention for students with substance problems On exit from Job Corps: intervention students

Random testing is not permissible

- · Criteria for AODA participation:
 - Positive test on entrance/after enrollment
 - Self-report alcohol/drug use Requests assistance
- · Written intervention plan is required and includes:
 - Schedule for repeat biochemical tests
 - Consequences of repeat positive tests
 - Behavioral agreement
 - Attendance at 4, l-hour/week sessions on self-help process Aftercare plan: 'quarterly AODA counseling and exit test
- · Center Director responsibilities:

Overall administration of biochemical testing Consequences of repeat positive tests Coordination of AODA activities across center programs Designation of Core Team to plan, coordinate and monitor AODA; include health services, basic education/vocational training, residential living, counseling, discipline and security

- AODA Specialist responsibilities:
 - Assigned to Health Services
 - Develop intervention plans, document progress
 Conduct counseling and support groups
 Work with center staff to ensure AODA integration
 - Work with Core Team on student intervention plan
 Work with recreation to reinforce substance free life style
 Liaise with community intervention resources
 - Make referrals to appropriate self-help groups Assist in quarterly reporting to NHS
- · Confidentiality of Test Results

Shared on "need to know" basis Parental notification if student is a minor

EXHIBIT II-1 (Continued) **ALCOHOL AND** OTHER DRUGS OF ABUSE (AODA) PROGRAM

PROGRAM . COMPONENTS

Intervention - Health Services Manager

- Conduct biochemical testing
 Orient new students to AODA
- Tram non-health staff to use saliva/breath alcohol tests
- Intervention AODA Specialist
 - Intervention planning
 Behavioral agreement
 Teaching self-help approach
 Group and individual counseling
- Basic Education/Vocational Training

Deliver 1 O-hour health education AODA unit

- Two major anti-substance use activities/year
- Assist in general substance abuse education
- Assist AODA Specialist with intervention plans
- Personnel Manager responsible for staff training on AODA policy/program, staff roles (alcohol testing), dynamics of substance use. Assisted by Mental Health Consultant and counseling.
- Residential Living responsible for incorporating AODA concepts into socialization activities. Counseling supervisor will assist AODA Specialist with intervention plans.
- Center Standards Officer (CSO) responsible for trafficking, possession and use procedures; sanctions for missed AODA appointments; assessing substance use in incident reports.
- Security Manager responsible for reducing supply of substances on center

CRITERIA . FOR FERMINATION

Medical termination for substance use should be considered when student:

Refuses to participate in intervention plan

 Violates behavioral agreement Repeatedly misses testing appointments

Alternatives to termination may be developed in consultation with Center Mental Health Consultant

Students must be provided with appropriate community referrals, if terminated.

OURCE: The National Office of Job Corps. PRH-6: Appendix 604. pp. 1-18. October 1991.

EXHIBIT II-2 OVERVIEW OF DTEP INTERVENTIONS BY DTEP SPECIALIST						
COMPONENTS	ACTIVITIES SPECIALIST	SUBSTANCE SPECIALIST	EDUCATION SPECIALIST			
1. Objectives	 Provide overall DTEP management Provide case management coordination Develop/implement specialist activities 	 Assess student drug/alcohol use Design individualize&intervention plans Monitor and reassess student progress 	 Assess student need for remedial/ enhanced education support Design individualized intervention plans Monitor and reassess student progress 			
2. Primary Interventions (Tasks)	 Provide oversight for all aspects of implementation Review DTEP student progress Systems: program meeting students' needs Individual: progress Supervise DTEP staff Schedule/conduct weekly case management meetings Develop/implement Life Skills Seminars Develop/implement activities program Develop intervention plan for each student for seminars/activities Monitor, reassess student progress 	 Assess substance problem Develop individual intervention plans Inform case management team Provide individual counseling Provide group counseling Develop peer leader/resource program Provide relapse interventions Monitor student progress Provide aftercare treatment plans/resources Provide referrals 	 Assess learning problems for DTEP students Develop remedial/ enhancement educational intervention plans Provide individual and group learning sessions Monitor student progress Develop tutorial program Develop a learning resource room Inform case management team 			

EXHIBIT II-2 (Continued) OVERVIEW OF DTEP INTERVENTIONS BY DTEP SPECIALIST **COMPONENTS** SUBSTANCE SPECIALIST EDUCATION SPECIALIST **ACTIVITIES SPECIALIST** Assist Activities Specialist develop Life Skills Seminars Develop intensive career preparation • Assist Substance Specialist develop 3. Secondary Interventions Peer Resource Program skills (Tasks) Provide staff training regarding Provide staff training regarding DTEP Identify community resources educational assessments and philosophy and interventions Provide family counseling interventions Provide staff training regarding Make referrals to Mental Health substance use Consultants when learning is related to emotional problems Discuss student intake assessment Discuss educational assessments 4. Role in Case Discuss assessments for activities Management Report student learning difficulties • Develop linkages between DTEP students and on-/off-center services Facilitate team progress reports Identify appropriate community Report aftercare plans and referrals Monitor-progress on activities and referrals Annotate intervention plans seminars Report aftercare plans and referrals Advocate for student ownership of all Report final dispositions interventions Annotate intervention plans

1.3 Comparison of DTEP and AODA

Findings of the comparison of substance intervention services at the experimental and control centers are summarized below. These findings are based on the evaluation findings presented in the Fourth Annual Report and are provided as context for the DTEP/AODA outcome analyses.

Student Intake Assessment

The Assessment Specialists at the control centers performed the same intake assessment as the experimental Assessment Specialists. All entering students were informed of the intake assessment during their first week and were told about the DTEP evaluation (all centers) and the respective intervention services (DTEP at experimental centers, AODA at control). Students submitted urine samples for drug testing within their first 48 hours at all centers. During the first 10 working days, students at all eight centers were requested to sign an informed consent for the evaluation and then complete the Individual Assessment Profile-Intake (IAP-I) and the Brief Symptom Inventory (BSI).

Comparison of Program Structure

A comparison of DTEP and AODA shows that the programs had two program components in common: (1) therapeutic and educational counseling through individual and group format, and (2) regular biochemical testing. Like counseling, several other activities were common to both DTEP and AODA, yet greater resources resulted in DTEP offerings being more routinized and/or more intensive.

1.4 Comparison of Program Operations

Program operations were compared for the **12-month** period October 1993 through September 1994, which marked a complete year of DTEP operating as designed. The following sections highlight the key findings of the comparison.

Detection of Substance Users at Intake

Approximately 5,500 students entered the eight demonstration centers from October 1993 through September 1994 (55% entered the experimental centers). Totals averaged 252 students per month at the experimental centers and 204 students per month at the control centers. Virtually all (98.5%) entering students were tested for substance use at intake. A slightly higher

proportion of control center students (38%) than experimental students (33%) tested positive for one or more drugs.

Program Participation Rates

Approximately 1,680 students were enrolled in DTEP (864 students) and AODA (8 16 students) during the 12-month period. This represents an average monthly enrollment of 72 DTEP students and 68 AODA students. Other findings from case load analysis include:

- The number of new enrollees, per month, <u>per center</u>, averaged 19 students in the DTEP program and 17 students in the AODA program
- The number of students continuing in DTEP averaged 125 students per month per experimental center and, in AODA, 85 students per month per control center
- Total students enrolled in DTEP averaged 149 students per experimental center per month, while total students enrolled in AODA averaged 112 students per control center per month.

A comparison of the experimental center DTEP and control center AODA student flows demonstrates that DTEP has a 25 percent higher census than the AODA program.

Program Services

Data about services provided to students at the DTEP (experimental) and AODA (control) centers were collected during the DTEP demonstration. These services included: individual counseling, group counseling, biochemical testing, and other "enhanced" services. Findings from the analysis of these data are summarized below.

On average, DTEP students received more than twice as many services as AODA students. Each DTEP student received an average of 24 service sessions compared to the average 10 service sessions received by AODA students. The average number of service sessions varied across the four DTEP and four AODA centers from a high of 29 sessions per student (Potomac, San Diego) to a **low** of five sessions per student (Knoxville, -Woodstock).

The average number of service sessions varied by type of service and by center. Individual counseling, a service relatively unique to DTEP centers, range **from** 11 sessions per student at San Diego to four sessions at Delaware Valley. AODA programs provided lower levels of individual counseling ranging from six sessions per student (Oneonta) to one session (Knoxville).

Group counseling sessions were provided with similar frequency at DTEP and AODA centers. On the-high end, Potomac provided an average of nine group counseling sessions per student while Knoxville and Woodstock provided fewer sessions (3 and 2 respectively).

Biochemical testing was also conducted with similar frequency by the DTEP and AODA centers. Overall, each DTEP and AODA student was subjected to an average of seven biochemical tests during their Job Corps careers.

The DTEP design emphasized the provision of case management and support services including educational tutoring and recreational activities. While all four DTEP centers provided this type of support, the frequency and intensity varied among these centers:

- Case management sessions per student ranged from an average of one (Potomac) to eight (San Diego)
- Educational services ranged **from** an average of seven sessions (San Diego) to 13 sessions (Potomac) per student
- Recreational activities were provided to divert students' attention from substance use to more healthful activities (e.g., camping, museums, movies, etc.). The average number of recreational activities per DTEP student ranged from two (San Diego) to 12 (Gainesville).

In summary, the average-per-student-service-session data reinforce the findings from the implementation evaluation: namely, the DTEP design was implemented differently across the four DTEP centers and, some cases, DTEP substance abuse interventions did not differ significantly from AODA interventions. Student outcomes analysis will be strengthened by taking account of "actual services received" as well as DTEP versus AODA participation. This additional level of analysis will be incorporated in the more detailed outcomes study which will be presented in the final evaluation report.

1.5 Comparison of DTEP and AODA Costs

Data available for the D'IEP evaluation were sufficient only to support a preliminary assessment of AODA budget allocations and DTEP expenditures. The following highlight the specific findings:

• The estimated average annual AODA costs for centers with one AODA Specialist was \$74,696; for centers with two AODA Specialists, the estimated average annual AODA cost was \$111,503.

- The total FY 1994 DTEP expenditures for the four experimental centers was \$933,262, or an average expenditure of \$233,316.
- The total estimated resources for each experimental center was \$3 17,2 14, or over 2.8 times the amount of funds allocated for each control center. The average allocation per student slot at the experimental centers was \$736 as compared with \$258 at the control centers.

As stated earlier, the average monthly DTEP participation was 149 students compared to 112 students in AODA. Therefore, the average resource per program participant per month was \$177 for DTEP and \$83 for AODA. When participation rates are factored, DTEP is approximately twice as resource intensive as AODA.

1.6 Implementation and Operation Issues

One of the primary objectives of the DTEP evaluation was to document new and/or continuing operational obstacles that confronted the DTEP teams and control center staff. During the first and second year program operations assessment, the identification of operational problems was a key evaluation responsibility. Once identified, issues and problems were addressed with mid-course corrections to either the DTEP design or the operating procedures. At this stage in the evaluation, the identification of operational issues is focused more on documenting program variables that may have affected program outcomes and student impacts.

Since there has been no additional on-site data collection, the operations assessment is dependent on previous analysis of operations issues. The evaluation team has up-dated this analysis, to the extent possible, with information collected during telephone contacts with the DTEP teams and control center Assessment Specialists prior to termination of DTEP at the experimental Job Corps centers in August 1995.

DTEP implementation and operational issues, identified during the first and second annual program assessments, were reviewed in terms of the status of their resolution and potential impact on the DTEP effects. These issues are described briefly below.

DTEP/AODA Integration

For the experimental centers, implementation of the DTEP program required coordination and integration with the existing **AODA** program. During the first program operations assessment, the evaluation found that DTEP and **AODA** had continued to function as separate programs. Some of the more serious resulting problems included: creation of operational

inefficiencies, confusion among center staff and students, and inconsistencies among the four centers, which jeopardized the evaluation design. The evaluation team recommended, as the highest priority, the integration of the two substance intervention offerings. CSAT and DOL supported the integration with revisions to the DTEP operating procedures.

DTEP/Job Corps Center Integration

A problem that was only slightly less serious was the lack of DTEP integration within the center. The isolation of DTEP contributed to a lack of cooperation and coordination between the departments, staff and students, which seriously jeopardized DTEP success.

A multi-pronged approach to resolving this issue was adopted by the four DTEP teams. Efforts included: providing DTEP-led **staff training**; including other key staff in case management meetings; ensuring DTEP representation at core team meetings; and restructuring DTEP to include standardized, Job Corps-based materials. These efforts contributed to DTEP integration at two of the four experimental centers.

DTEP Organization, Management, and Staffing

The DTEP demonstration design specified that organizationally the DTEP team report directly to the center director to ensure that DTEP receive ongoing organizational and management support. While each of the four experimental centers continued to adhere to this requirement, the nature of the interaction between the center director and the DTEP team moderated in frequency and urgency as the project approached steady-state operations. To address this problem, the National Office of Job Corps decided to organizationally relocate DTEP within the Health Services Department.

The DTEP design also specified that the Activities Specialist have management responsibilities for the DTEP team. At the time of the second annual program operations assessment, each of the Activities Specialists was fulfilling the required management duties. Problems occurred, however, because frequently the time and energy required to perform managerial functions were interfering with service delivery, and at two centers, the Activities Specialist appeared to neglect other duties by choice.

Three DTEP centers needed, and were subsequently authorized, additional staff to accommodate the project's needs. The enhancement of staff resources, however, was stymied by difficulties in recruiting qualified staff together with inevitable staff turnover. In fact, the

difficulties in filling staff vacancies persisted and were sufficiently serious to potentially affect the outcomes and impacts of DTEP at three centers.

DTEP Services

The preliminary analysis of the services data supports the program operations assessment. For example, the program operations assessment identified that the Activities Specialists had difficulty balancing their dual roles: manager of the DTEP team and Specialist responsible for implementing the recreational and Life Skills component of DTEP. The services data show that the two centers where the Activities Specialists had the most difficulty balancing their dual responsibilities did not provide recreational activities as often, or for as long as the other centers.

Staff turnover was sufficiently serious to potentially **affect** DTEP at three centers and AODA at two centers. At all but one of these centers, the range and frequency of student service sessions was lower than that provided by their companion center.

The services data also reflected the DTEP team's unique dynamics. The San Diego DTEP team, for example, was committed to the individual counseling approach and case management, and led the-other teams in the frequency of these types of service provision. The Potomac DTEP team indicated that the group counseling approach worked well with their students, and in keeping with this philosophy, averaged the most group counseling sessions per student.

DTEP "Phase Down"

The phase down of the DTEP demonstrations caused DTEP team members and AODA Assessment Specialists to seek more secure positions before the conclusion of the demonstration. This out-flow of trained staff further exacerbated the staffing problems described earlier. In fact, most of the DTEP centers and two of the control centers functioned with partial staff complements and diminished services for up to five months during DTEP phase down. As a result, the DTEP interventions were not fully provided at all experimental centers during the entire demonstration period.

AODA Program Success

Another factor that further diluted the contrast between demonstration interventions and "regular" interventions was the fact that not all AODA programs functioned the same. One control center provided an AODA program that was more rigorous than the other three control

centers' AODA programs and, in fact, was similar to DTEP. The strength of this AODA program may impact the evaluation outcome findings since students at one pair of experimental/control centers received similarly "enhanced" services.

2. JOB CORPS CENTER STUDENT PROFILES²

Measuring the success of the DTEP experiment ultimately rests with the Job Corps students through indications of decreased substance use and increased Job Corps performance. To set the stage for these analyses, a description of youth who entered the four experimental and four control centers is provided. The information contained in this section summarizes data provided in the Third Annual Report.

2.1 Characteristics of All Entering Job Corps Students

A total of **6,5** 10 Individual Assessment Profile-Intake (UP-I) forms were collected from the four experimental and four control centers between February 1993 and July **30, 1994**. Student demographic characteristics collected by the IAP-Is are summarized in Exhibit 11-3. Of the **6,5** 10 students, 3,622 (56%) were collected from the experimental centers, while 2,888 (44%) were collected from the control centers. In total, almost one-half of the entering Job Corps students were between the ages of 18 and 20 years; over one-third were 17 years or younger while less than one-fifth were 21 years or older. The majority of all entering students were male (**62%**), while the predominant **race/ethnicity** was African American (59%). Overall, one-fourth of entrants had lived with both parents between the ages of 6 and 14 and over one-half had lived with one parent. Most (82%) of the entering students did not have children.

Approximately **four-fifths** of the students completed ninth to 12th grades, while approximately one-fifth completed eighth grade or less; over one-third of all students who were 18 years or older had high school diplomas or **GEDs** when they entered Job Corps. More than half (53%) of the new entrants reported having committed a crime.

There were relatively few differences between newly enrolled students in experimental and control centers with regard to reported criminal activity, as shown in Exhibit 11-4. More than half (53%) of the entering students reported having committed a crime, while fewer than **one**-third (30%) reported ever having been arrested or booked for a crime.

² Material contained in this section was extracted from the Fourth Annual Report, Chapter III.

CHARACTERISTICS OF NEWLY ENROLLED STUDENTS IN EXPERIMENTAL AND CONTROL CENTERS

SITES TOTALSITES CATEGORY		RIMENT (N=6510		CONTROL . (N=2888) %
Age:				
≤ 17years		39.9	37.7	42.8
18-20years	43.9		44.1	43.5
≥ 21	years	16.2	18.2	13.7
Gender:				
Male	62.1		60.7	63.7
Female	37.9		39.3	36.3
Race/Ethnic@:				
African Amer	can	58.8	54.0	64.7
HWhisepanic) (not		17.4	16.4	18.6
Hispanic	18.0		21.9	13.2
Other	5.8		7.6	3.5
Lived With Between 6 and 14 years:				
Both parents		28.0	29.8	25.8
One parent		56.8	54.6	59.4
Other (grandparent parents, adopted parents, other)	s, fo	ster	15.2 15.6	14.8
Have/Don't have children:				
No children		82.0	81.7	82.3
One child		13.4	13.5	13.3
Two or m	ore c	hildren	4.6 4.8	4.4
Educational Attainment Last grade completed:				
8th and	less	18.3	17.3	19.6
9ththrough 11	:h	62.9	61.8	64.1
12th and	more	18.8	20.9	16.2
< 18 years	with	HSD/GED	2.2	2.3 2.0
≥ 18 years	with HS I	D/GED	35.2 36.7	33.2

EXHIBIT II-4 CRIMINAL ACTIVITY REPORTED BY NEWLY ENROLLED STUDENTS IN EXPERIMENTAL AND CONTROL CENTERS

IN EAFERINGENTAL AND CONTROL CENTERS					
STUDENT CRIMINAL ACTIVITY	TOTAL %	EXPERIMENTAL SITES %	CONTROL SITES		
Ever committed a crime	(N=6510)	(N=3622)	% (NI=2888)		
Ever commuted a crime			(N=2888)		
	52.9	54.5	50.9		
Most frequent crimes committed by students who reported committing a crime:	(N=3443)	(N=1974)	(N=1469)		
Shoplifting	40.0	39.5	40.6		
Drug sales	35.7	35:0	36.7		
Possession of stolen goods	27.7	29.9	24.8		
Simple assault	25.2	24.4	26.3		
Status offenses	45.1	48.2	40.9		
Aggravated assault	18.3	19.8	16.3		
Ever arrested/booked	(N=65 10)	(N=3622)	(N=2888)		
	29.9	28.7	31.3		
Most frequent offenses for which students were					
ırrested:	(N=1944)	(N=1039)	(N=905)		
Simple assault	17.9	16.6	19.4		
Shoplifting	17.5	16.7	18.6		
Aggravated assault	10.1	11.7	8.3		
Drug sales	13.0	12.1	13.9		
\verage age at first arrest	15.7	15.6	15.9		
lold drugs in last 12 months	(N=65 10)	(N=3622)	(N=2888)		
	9.5	9.2	9.9		
Member of a gang	(N=3402)	(N=1717)	(N=1685)		
	12.5	12.4	12.6		

Among those students who reported committing a crime, the,most frequently reported crimes were: status offenses (45%), shoplifting (40%), drug sales (36%), possession of stolen goods (28%), simple assault (25%), and aggravated assault (18%). Among those students who reported having been arrested, the most frequently reported offenses were: simple assault (18%), shoplifting (18%), drug sales (13%), and aggravated assault (10%). Relatively few students (13%) reported being members of a gang; even fewer (9%) reported having sold drugs in the last 12 months:

2.2 Jobs Corps Student Substance Use

The majority of newly enrolled Job Corps students in both experimental and control centers had at least experimented with some form of substance use: Almost three quarters had used alcohol, more than half (57%) had used a drug, and over 40 percent had smoked cigarettes. In both the experimental and control centers, the average age of first drug use was less than 1.5 years.

Drug users, in particular, were more likely to be younger (63% of students under 18) rather than older (58% of students 18-20), male (66%) rather than female (SO%), and white and Hispanic (66% each) rather than African American (58%) and students of other race/ethnicities (5 1%). Substance use, again particularly drug use, is clearly associated with troubled family backgrounds. Proportionally more drug users than alcohol only users and non-users reported running away from home, being expelled or suspended from school, committing a crime and being a gang member.

To further understand the relationship between Job Corps student characteristics and substance use, risk factor analyses were conducted; the pool of **6,5** 10 students for **whom** an **IAP-I** had been completed were separated by drug users and non-drug users, and by alcohol users and non-alcohol users. Chi-square tests of significance yielded the following results:

- A total of 2,585 students were included in the alcohol use risk factor analysis. Very few factors were associated with alcohol **only** use-factors associated with increased use of alcohol included cigarette use, certain criminal activities, parental alcohol problems, and having been kicked out of the **family** home.
- A total of 5,188 students were included in the drug use risk factor analysis. Tobacco use and familial substance use were high risk factors for student drug use, while gender (male), race (Caucasians and Hispanics), criminal activity, exclusion from the home, school suspensions, and school expulsions were also associated.

Additional analyses were conducted to develop a drug use prediction model. Logistic regression modeling revealed that eight variables contributed to differentiating drug users from non-users including gender, ethnicity, whether the student had ever run away from home, whether the student had been suspended and expelled, whether the student smoked, mother's drug use, father's alcohol use, and whether the student was sexually active.

2.3 Comparison of DTEP and AODA Participant Characteristics

The comparability of students served by DTEP and students served by the AODA program is an important internal validity issue. A comparison of the these two groups determines whether selection processes used to **identify** students in need of program services result in similar students being served by the two programs.

To conduct comparative analysis of the DTEP and AODA students, the total IAP-I population (excluding transfers; N=6,046) was used to identify and compare all students in the experimental and control centers as well as DTEP, AODA, and non-program students. Results of the comparisons include:

- DTEP and AODA participants appear quite similar with respect to important gender, family, and education variables
- Age and race/ethnic&y differences between the DTEP and AODA populations mirror the eight center-wide populations resulting in a slightly older DTEP group with a higher population of Hispanic students and a lower proportion of African-American students.

Specific problems behaviors and risk factors associated with problem behaviors were identified from the IAP-I including exclusion from the family home, female sexual abuse, and school suspension/expulsion. The analysis showed that DTEP and AODA participants were similar for these variables. DTEP and AODA students reported a difference for only one risk factor. Proportionately more DTEP students (16%) than AODA students (11%) reported being placed in a different home by authorities.

Substance use patterns among experimental and control center populations were compared along with the DTEP participants, AODA participants, and nonprogram students. The results of these comparisons are presented in Exhibit II-5.

As shown, there were several differences between the experimental and control center populations' substance use, and between DTEP and AODA participant substance use, including:

EXHIBIT II-5 COMPARISON OF DTEP AND AODA PARTICIPANT CHARACTERISTICS SUBSTANCE USE

	Program Cen	ter Type	Significance	Drug Treatment Program Type		Non	Non- Significance
Characteristics	Experimental	Control	Level*	DTEP	AQDA	Program	Level*
Percentage of students kho currently smoke cigarettes	4417	49.4	.00	72.6	71.7	34.0	.68
Percentage of students younger than 21 years old who drank alcohol in the last month	35.7	27.2	.00	53.9	36.9	24.8	.00
Percentage of students who ever used drugs	56.9	57.1	.89	90.2	89.4	40.5	.52
Percentage of students who used drugs in the last year	47.6	50.1	.05	88.1	87.1	29.3	.49
Percent distribution of students by number of different drugs used last			.01				
year None	53.1	50.5		12.2	13.2	71.4	.00
One Two or more	37.5 9.3	41.2 8.4		67.0 20.§	71.8 15.0	24.2 4.4	
Percentage of students who used drugs 4+ times in the last month	16.2	18.4	.03	45.4	43.9	3.5	.49
Percentage of students who used a drug other than marijuana last year	10.7	9.4	.09	22.6	16.2	5.4	.00
Percentage of students with positive urinalysis (at IAP interview)	29.9	35.2	.00	94.0	94.8	1.0	.41
Percentage of students whose biological mother used illegal drugs	8.7	14.2	.00	10.3	15.7	10.2	.00

^{*} Significance level of Chi-square statistics.

- Control center students (49%) were more likely to smoke cigarettes than experimental center students (45%). The differences between DTEP (73%) and AODA (72%) cigarette smokers was not significant; however, program participants were much more likely to smoke than the center populations.
- The proportion of students under 21 who drank alcohol in the last month was higher at experimental (36%) than control (27%) centers and much higher between DTEP (54%) than AODA (37%) participants.
- Significantly more DTEP (21%) than AODA (15%) reported using two or more different drugs in the last year and proportionately more DTEP (23%) than AODA (16%) reported using a drug other than marijuana.
- As previously reported, proportionately more control centers (35%) than experimental centers (30%) students tested positive on entry to Job Corps.. There were no differences, however, between the DTEP (94%) and AODA (95%) drug entry tests.
- Proportionately more control centers (14%) than experimental centers (9%) students reported maternal drug use; this was also true for the AODA (16%) compared to the DTEP (10%) students.

Self-reported criminal activities were compared between experimental and control center students and between DTEP and AODA participants. Findings from these comparisons are presented in Exhibit **II-6**.

Over half of all students reported ever being involved in a criminal activity while significantly more experimental (60%) than control (53%) and DTEP (77%) than AODA (67%) reported this involvement. Approximately three-tenths of all students reported ever being arrested with a slightly higher proportion of DTEP (44%) and AODA (41%) students reporting arrests; the differences between DTEP and AODA, however, were not significant. Conviction rates were higher among control center (19%) compared to experimental center (13%) students but were similar between DTEP (22%) and AODA (24%) students.

Just over one in 10 students (13%) at all centers reported gang membership. Significantly, more DTEP (20%) than AODA (16%) students reported being members of a gang.

One-fifth of all students reported ever having sold drugs. Significantly more DTEP (35%) than AODA (29%) students reported this activity. One-tenth of all students reported

EXHIBIT II-6 COMPARISON OF DTEP AND AODA PARTICIPANT CHARACTERISTICS CRIMINAL ACTIVITIES

3	Program Ce	nter Type	ter Type Significance		Drug Treatment Program Type		Significance
Characteristib	Experimental	Control	Level+	DTEP	AODA	Non-Program	Level*
Percentage of students who were ever involved in criminal activity	59.8	52.7	.00	76.9	67.0	48.5	.00
Percentage of students who were ever arrested for a crime	28.7	30.2	.23	44.1	40.9	22.5	.15
Percentage of students who were ever convicted of a crime	13.0	19.1	.00	22.2	24.3	12.1	.27
Percentage of students who were gang members	13.1	13.4	.78	20.0	16.1	10.8	.02
Percentage of students who ever sold drugs	20.8	19.3	.14	34.8	29.1	13.9	.01
Percentage of students who sold irugs in the last year	10.3	10.3	.97	19.1	15.7	6.5	.04

^{*} Significance level of Chi-square statistics.

selling drugs in the last year while a slightly higher proportion of DTEP (19%) than AODA (16%) students reported this activity.

In summary, a higher proportion of DTEP and AODA students reported engaging in criminal activities than their respective center populations. A significantly higher proportion of DTEP than AODA students reported ever committing a criminal act, belonging to a gang, and selling drugs. The differences between the DTEP and AODA students, however, were relatively small with respect to these criminal acts.

III. EVALUATION OF DTEP FOR REDUCING SUBSTANCE USE AND ABUSE

III. EVALUATION OF DTEP FOR REDUCING SUBSTANCE USE AND ABUSE

This chapter presents findings of the Job Corps drug treatment enrichment program (DTEP) to reduce substance use and abuse among identified disadvantaged youth. These analyses compare outcomes based on a one-year follow-up survey of a selected sample of Job Corps youth enrolled in the experimental (DTEP) program (in four treatment sites) and a comparison sample of youth enrolled in the original Alcohol and Other Drugs of Abuse (AODA) program (in four matched control sites). The report examines outcomes specifically related to alcohol and other drug use/abuse and highlights additional effects of DTEP on mental health status, criminal activity, employment and earnings; welfare use, and some educational and vocational training outcomes.'

It is expected that students enrolled in DTEP will have reduced substance use and abuse and that this reduction in use and abuse will be greater for DTEP compared to students in AODA. In addition, it is expected that DTEP students will show additional positive outcomes on other desired Job Corps program outcomes (e.g., employment) compared to students enrolled in AODA.

We present a general review of the analysis strategy, describe the follow-up survey sample, briefly discuss analyses of non-response patterns, and provide a summary of the analyses that directly evaluate **DTEP's** effects on selected outcomes.

1. GENERAL ANALYSIS STRATEGY FOR THE EVALUATION OF DTEP

To estimate the overall effect of DTEP on drug use and other outcomes of interest requires models that account for the quasi-experimental nature of the research design. Although demonstration sites and control sites are matched, it is important to account for possible differences among youth assigned to either AODA or DTEPs in the control and demonstration settings, respectively, when evaluating the impact of DTEP. To do this, multivariate regression models (e.g., logistic regression or multiple regression models) are used in order to control for possible initial differences on relevant individual level variables between enrollees in DTEP and enrollees in the AODA program. (For a detailed review of these methods and the variables introduced as controls, see Appendix C and Appendix D.)

We include an appendix that examines additional outcomes of length of stay in Job Corps and educational/vocational outcomes (see Appendix F).

For ease of interpretation, we calculate standardized values for each outcome based on the results of these models. These standardized percentages (or standardized means) allow a direct comparison of DTEP students and AODA students as if the latter students had the same characteristics as the entering DTEP enrollees. The difference between the adjusted percentages for AODA and for DTEP can be directly interpreted as the effect of DTEP, or alternatively, the difference in outcome had the DTEP students enrolled in the AODA program and not DTEP.

The statistical significance of the outcome due to DTEP can be assessed, and the difference in the percentages will suggest the substantive impact of DTEP on the outcome. Relative differences in the percentages will help gauge how strong the effect of DTEP, versus AODA, is on a given outcome. These differences are highlighted and are the basic information provided in the text of this report.

Details of the models and analyses are provided in appendices. For each outcome we include a base set of control factors, but each model also contains controls specific to the outcome analyzed, hence making the best comparison possible between AODA and DTEP students. In addition, for each outcome we consistently explored four sets of interactions with the program effect of DTEP. These show whether the effect of DTEP changed depending upon given characteristics of the individual student, (e.g., if males in the DTEP had greater reductions in their drug use than females in DTEP). We explored for differences by gender, previous drug use, mental health status, and whether the student stayed in Job Corps for at least 30 days. Significant results from the models and from these tests for interactions are discussed under "additional findings" for each outcome.

2. **DESCRIPTION OF THE FOLLOW-UP SAMPLE**

All incoming students to the eight Job Corps Centers participating in the **study**² were administered an intake survey entitled the Individual Assessment Profile - Intake (IAP-I). There are 6,590 completed **IAP-I** questionnaires from eight study centers. At the outset of this study, the IAP-I instrument was revised several times to tailor it to the specific needs of the study. The 6,590 IAP-I surveys that are considered in this report include **all** students who completed versions 4 and 5 of **IAP-I**. These two versions yield comparable data. The first three versions of the IAP-I could not be used to create data that would be comparable to that obtained from the versions 4 and 5. The **IAP-I** data that are used in this report come mostly from students who enrolled in Job Corps between March/April of 1993 through July/August of 1994.

Demonstration centers were Delaware Valley, Gainesville, Potomac, and San Diego. Control centers were Oneonta, Knoxville, Woodstock, and Sacramento.

From the 6,590 incoming students, 5,287 (80.2%) were determined to be eligible to participate in the follow-up. Eligibility was determined by the following criteria:

- The student data could be matched to the Job Corps management information system database (SPAMIS)
- On the basis of the SPAMIS data, the student was determined to be a <u>new</u> student (not a re-enrollment or transfer) when enrolled in one of the study sites
- There were valid data about the student's assignment to a drug treatment program
- The student did not refuse participation in the follow-up survey when asked at the time of enrollment in Job Corps.

Among the 5,287 eligible students, 1,935 were selected to be included in the follow-up sample. **The** selection was done as follows: Among the students who were assigned to DTEP or AODA programs, a sample was selected proportional to the size of the center. Among the 1,743 **follow-** up eligible students who enrolled in the DTEP or AODA programs, 1,562 (89.6%) were selected to be included in the follow-up sample.

The design of this study required the selection of a matched non-program sample for the follow-up. The targeted matched non-program sample size was one-quarter of that for the program students. Matching was done as follows: First, one-quarter of the program students who were selected to participate in the follow-up survey were selected at random, to be matched to non-program students. We refer to these students as the index students. Next, among the non-program students, the potential set of matches were determined for each index student. The potential set of matches had to be from the same center, had to be of the same gender and racial and ethnic group, and had to have the same self-reported drug use status for the 12 months preceding their Job Corps enrollment. Among this potential set of matches, one student was matched to the index student, based on a minimum distance criterion. A score was computed for each potential match that measured the degree of divergence from the index student determined by the age group (17 or less, 18 or 19, 20 or more), county of residence, entry GED or high school diploma status, month of Job Corps enrollment and whether the student had ever been involved in criminal activity. The non-program student with the minimum divergence score was selected into the follow-up sample.

Among the 3,544 non-program students who enrolled in the eight study sites throughout the demonstration, and who were eligible for follow-up, 373 were matched to the index students. This resulted in a total of 1,935 students selected to participate in the follow-up. Because of the

time frame of **the study**, **the** follow-up data collection had to be-completed by January 1996. The follow-up survey was designed to be administered to the students one year after their termination from Job Corps. For some of the students who were selected to participate in the follow-up survey, a period of one year had not elapsed since their termination. In addition, several study students had not yet terminated from Job Corps by January 1996. Among the 1,935 students targeted for follow-up, there were 299 students who became thus ineligible for follow-up. Among the 1,636 students eligible, 1,156 students were actually interviewed. The overall response rate to the follow-up survey is 70.7 percent, with 70.8 percent for program students and 70.1 percent for non-program students (difference not significant).

We investigated the factors that may be associated with the response rate. Personal demographic and educational characteristics of the students are not significantly associated with the response rates. The only attribute that is significantly associated with the response rate is the site and, to some extent, the enrollment cohort of the student. Students who attended Sacramento and Gainesville centers had lower response rates than the other centers. More importantly, the students who enrolled in the study sites during the last six months of the demonstration, after about February of 1994, had significantly lower response rates. For example, among the students who enrolled in the study sites between March 1994 and the end of the demonstration program, the response rate is 60.9 percent.

The low response rates for later cohorts is partly because of the design of the study and the truncation of the follow-up data collection. The follow-up interview was scheduled 12 months after termination from Job Corps, and the follow-up data collection was to be completed in January of 1996. Hence, the later entry cohorts had a short time window in which they had to be located and interviewed. This reduced the likelihood that they would have completed interviews. The implication of this is that the students who were long-term stayers in the Job Corps centers, who are likely to be better students, who enrolled in the study sites after March of 1994, were under-represented in the follow-up sample. Hence, it is likely that the analyses of data from the later cohorts of entry will lead to an under-estimation of the impacts of the demonstration program.

To partially account for the potential biases due to non-response, we estimated analysis weights that account for unequal sampling probabilities and non-response. While the sampling weights may, to some extent, adjust the estimated program impacts to account for the biases, the low response rates, particularly among the later enrollment cohorts, undoubtedly influence the findings of the analyses of the follow-up data. Furthermore, it is likely that these estimates are downward biased especially for the later enrollment cohorts, since these students are necessarily confined to short-term stayers in the Job Corps program.

3. AN EXAMINATION OF THE CHARACTERISTICS OF THE RESPONDENTS AND NON-RESPONDENTS OF THE FOLLOW-UP SURVEY

The SPAMIS database allows us to investigate some characteristics of the students who were included in the follow-up sample as well as those who were not included in the follow-up sample. In this section, we provide some comparisons of the durations of stay in the Job Corps program of students who responded and those who did not respond to the follow-up sample. The duration of stay is measured in terms of the total number of days the student was paid in Job Corps. These days do not include leaves and vacations and hence provide a better measure of "exposure" to the program.

We first compare the duration of stay of the program students who were selected to the follow-up sample (N=1,935) and those who were not selected. These two groups are not significantly different in their duration of stay. Hence, we conclude that the sampling process did not yield a group of students who selectively represent longer- or shorter-term stayers.

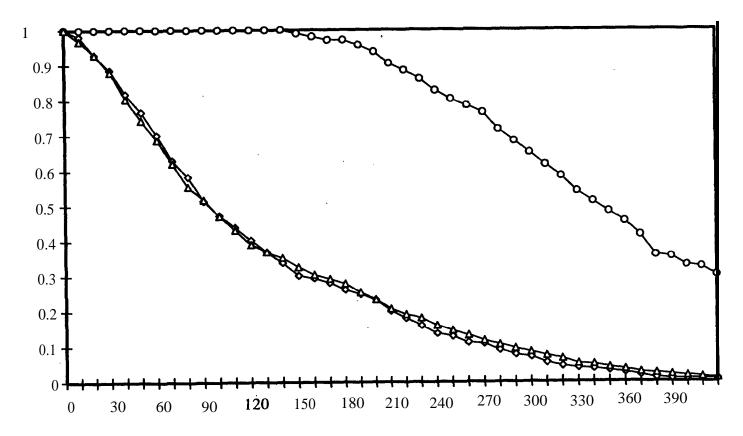
Next, we compare the duration of stay of the students who became ineligible to the follow-up because sufficient time had not elapsed since their termination (N=237 DTEP and AODA students) and those who were eligible (N=1,323). Those who were eligible to the follow-up were significantly less likely to still be in Job Corps in every duration of stay. In other words, those who became ineligible because of the truncation of data collection were indeed mostly long-term stayers in Job Corps. Exhibit III-1 provides the proportions of students who were still in Job Corps at each duration of stay, by follow-up response status, among all DTEP and AODA students who were selected to participate in the follow-up (N=1,560 DTEP and AODA students among the total of 1,935 students).

Exhibit 111-1 also provides a comparison of the DTEP and AODA students who were eligible to be interviewed but were not interviewed, to those who participated in the follow-up. These two groups were not significantly different in their duration of stay. At every duration, largely similar proportions of these two groups remain in Job Corps. The median duration of stay (number of days of stay when 50 percent of the students had left Job Corps and 50 percent were still in the program) among those who became ineligible is 344 days, as compared the median duration of stay of 93 days among eligible non-respondents and 94 days among the respondents.

EXHIBIT III- 1

Proportions of DTEP and AODA students who were still in Job Corps at the corresponding duration of stay (in days) by their follow-up survey status:

those who did not respond, and those who responded.



→ Became ineligible for follow-up → Did not respond to the follow-up *Responded to the follow-up

There are also differences in the durations of stay among the DTEP and AODA students who did or did not respond to the follow-up survey by enrollment cohort. Exhibit III-2 depicts these differences. Among the students who were eligible for follow-up (N=1,323 DTEP and AODA students), those who enrolled prior to March 1994 have significantly higher durations of stay in Job Corps (median duration of stay of 105 days) than those who enrolled after March 1994 (median of 71 days). Similarly among the students who were interviewed for the follow-up, earlier enrollment cohort had a median duration of stay of 106 days as compared to 66 days by the later enrollment cohort. These differences are the result of the data collection truncation such that the students for whom sufficient time between termination and follow-up interview had not elapsed could not be interviewed by the end date of data collection.

These findings indicate that it is very important to consider the nature of the follow-up sample in interpreting the results of the analyses presented here. The analyses of the results from the follow-up survey will allow us to make inferences about the impact of DTEP on short-term stayers in Job Corps, but is not likely to yield valid inferences about the long-term stayers. Unfortunately, the long-term stayers are likely to have benefited from the enhanced services of DTEP more than the short-term stayers. Hence, the inferences **from** the follow-up survey are likely to under estimate the true impacts of DTEP.

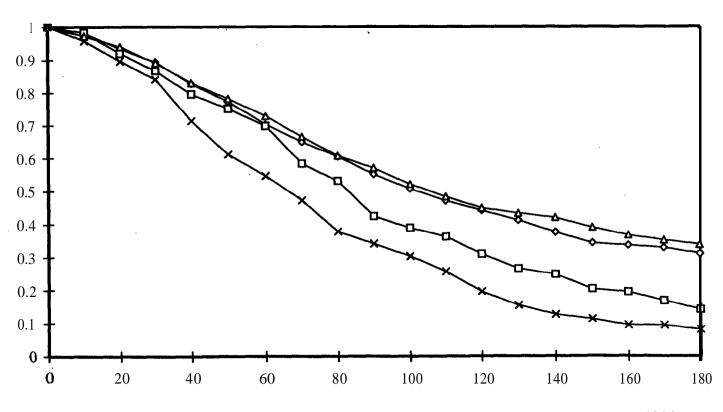
4. EFFECTS OF DTEP ON ALCOHOL ABUSE AND DRUG USE/ABUSE OUTCOMES

DTEP was primarily designed to reduce drug use and abuse among Job Corps students. The program provided more individual level counseling and group level counseling compared to the standard AODA program. In addition, DTEP provided direct life skills training and recreational activities to enhance students' social skills and protective factors and; thus, reduce or eliminate students' drug involvement. We expect DTEP students to show significant reduction in their use and abuse of drugs and that this reduction will be significantly greater for DTEP versus AODA students.

We focus on marijuana use and cocaine/crack use as outcomes. These two drugs represent the two most frequently used illegal drugs prior to Job Corps entry for both DTEP and AODA students; marijuana has substantially higher use than cocaine/crack. We also include additional outcomes of alcohol binge drinking as indicator of alcohol misuse or abuse and a measure of intensity of use of marijuana and other drugs to distinguish "any use" from a pattern of "consistent **and** extensive" use. (See Exhibit 1113.)

EXHIBIT III-2

Proportions of DTEP and AODA students who were still in Job Corps at the corresponding duration-of stay (in days) by enrollment date and whether they responded to the follow-up survey (all eligible students for follow-up).



→ Did not respond - Enrolled prior to March 1994

─□ Did not respond - Enrolled in March 1994 or later

-X- Responded - Enrolled in March 1994 or later

Responded - Enrolled prior to March 1994

EXHIBIT III-3 EFFECTS OF DTEP ON ALCOHOL ABUSE AND DRUG USE/ABUSE OUTCOMES MAIN FINDINGS

- Over 90% of DTEP students report they have used drugs 12 months prior to entering Job Corps; 9 1% report marijuana use and 8.3% report cocaine/crack use.
- At follow-up, DTEP students show a significant decline in marijuana use but only small differences in marijuana use compared to comparable AODA students; levels of use for AODA are 62% and for DTEP 56%. These differences are statistically significant.
- At follow-up, **DTEP** students show substantial decline in cocaine/crack use and statistically significant differences in cocaine/crack use compared to comparable AODA students; levels of use for AODA are 2.5% and for DTEP 1.4%.
- · No differences were found for binge alcohol drinking between AODA and DTEP students at follow-up.
- At follow-up, DTEP students were significantly less likely to engage in moderate to extensive use of marijuana than comparable AODA students. 4 1% of DTEP students reported weekly to daily use of marijuana compared to over 50% of the AODA students.

4.1 Measures of Drug Use and Binge Drinking

The drug use measures are self-reported use between the time students were terminated from Job Corps and the follow-up interview (approximately one year). Students were presented a list of illegal drugs, and for each drug students were asked whether they had used this drug between their termination from Job Corps and the follow-up interview. If using, they also responded to a set of questions regarding the frequency of use and other information about their use of that particular drug. The two main outcomes of interest are in the abstinence from marijuana and from cocaine/crack use.

Frequency of marijuana use is provided by the respondent for the period between termination and follow-up interview. We characterize students' use as none, once per month (occasionally), once per week (weekly), and approximately daily use (daily). In addition, we characterize their overall drug involvement as: none, low (low use of marijuana only), moderate (moderate use of marijuana only), and high (high use of marijuana or any other drug use).

Respondents also respond to a series of questions about the frequency of their drinking alcohol and weight specific amounts of alcohol consumed. Binge drinking is defined by exceeding weight specific amounts of alcohol within one hour. We measure whether **any** binge drinking occurred in the 30 days prior to the follow-up interview and whether it occurred at all between termination and follow-up.

4.2 Statistical Methods for Evaluating DTEP

We use multivariate logistic regressions to estimate the adjusted effect of DTEP on the presence or absence of use for each drug and alcohol behavior. Direct comparisons of DTEP students and AODA students are not possible given initial differences among the students. The multivariate logistic models adjust for relevant demographic (e.g., age and gender) and social/economic background characteristics of the students (e.g., prior employment) and their program participation in DTEP or AODA; in addition we include factors specific to different outcomes, such as previous level of drug use prior to their entry into Job Corps. For frequency of use and the extent of drug use, which have more than two categories, we use multinomial logistic' regression and ordinal logistic regression models to assess the outcome. Similarly these models include relevant controls; we present the results from the multinomial logists.

The models allow the calculation of standardized percentage of DTEP students having used marijuana or cocaine/crack between termination and follow-up and percentage of AODA students having used these drugs as if both AODA and DTEP students had exactly the same relevant demographic and social/economic characteristics. Similar models are used to calculate standardized percentages of binge drinking and for frequency of marijuana-use. (Detailed results of these models are in Appendix E.)

4.3 Effects of DTEP

Both AODA students and DTEP students show lower levels of use between termination and follow-up compared to the prior 12 months to Job Corps entry. Importantly, for both marijuana and cocaine/crack use, students in DTEP show statistically significant lower levels of use at follow-up compared to comparable AODA students. These results are detailed below.

DTEP students also showed significantly less frequent use ofmarijuana. There were no differences between DTEP and AODA students at no use or monthly use; however, significantly fewer DTEP students versus comparable AODA students used on a weekly or daily basis. Similarly, DTEP students showed less extensive use of drugs; DTEP students are less likely to use other drugs (e.g., cocaine, hallucinogens) and/or daily use of marijuana.

Regarding misuse of alcohol, DTEP students showed no significant differences compared to AODA students. Use of any alcoholic beverage is similar between AODA and DTEP students and the specific binge drinking measure showed no difference in misuse of alcohol.

Marijuana

The percentage using marijuana prior to entry into Job Corps and post-termination from Job Corps is given in Exhibit III-4 and Exhibit 111-5. Clearly, use of marijuana prior to entry is high. Over 90 percent of entering DTEP students reported using marijuana 12 months prior to their enrollment in Job Corps. There is a general decline in use for all AODA and DTEP Job Corps participants to about 60 percent.

EXHIBIT III-4 EFFECT OF DTEP ON THE PERCENTAGE OF STUDENTS USING MARIJUANA BETWEEN JOB CORPS TERMINATION AND FOLLOW-UP INTERVIEW		
Percentage of DTEP students who had used marijuana 12 months prior to entering Job Corps	91.2%	
Adjusted percentage of DTEP students who had used marijuana post-termination from Job Corps	56.0%*	
Adjusted percentage of AODA students who would have used marijuana post-termination from Job Corps	62.2%*	

^{*}significant difference between DTEP and AODAp<.05

Differences in post-termination use of marijuana among comparable DTEP and AODA students are statistically significant, albeit relatively small to moderate in effect size; approximately a 6 percent difference.

The adjusted effects of **DTEP** (adjusted for individual prior level of general drug use, other relevant characteristics, plus time between termination and follow-up) show an expected percentage of students using marijuana of 56.0 percent. This can be compared to the expected 62.2 percent level of use for AODA students, if AODA students had the same individual characteristics as observed for DTEP students. **The difference between 62.2 and 56.0 (5.8%)** represents an adjusted effect of DTEP that is statistically significant at the .05 level and represents the estimated effect of DTEP on the percentage of students using marijuana. (Detailed results from these models are given in Appendix E.)

EXHIBIT III-5
Effect of DTEP on percentage of Job Corps students using marijuana (self-report)

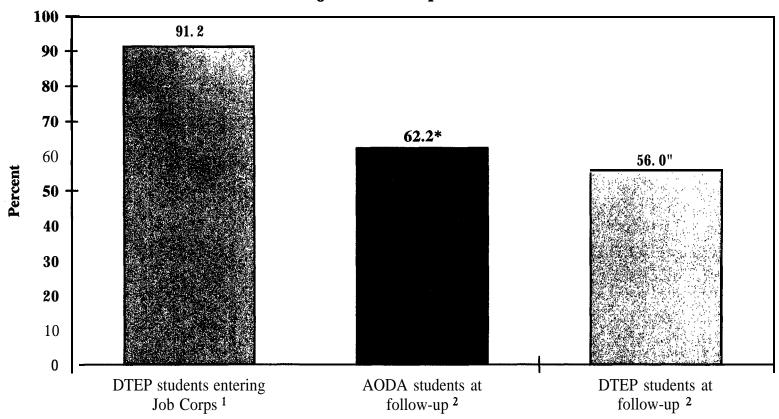


Table Notes:

- 1. Pre-program use in the 12 months prior to entering Job Corps; follow-up use since termination from Job Corps.
- 2. The percentage is standardized. The % difference between AODA and DTEP at follow-up represents the effect of DTEP adjusted for the average characteristics of enrollees in the DTEP program and the AODA value interpreted as the level of outcome had the students *not* received the DTEP program.

^{*} significant difference between AODA and DTEP p < .05

Cocaine/Crack

Prior use of cocaine and/or crack is at much lower levels than marijuana use among AODA and DTEP students. Only 8.6 percent report use within the last 12 months prior to entering Job Corps. Upon termination the level of use for both DTEP and AODA students is lower. (See Exhibits III-6 and 111-7.)

Direct comparisons using the adjusted percentages between **DTEP** and **AODA** students shows an expected level of use of 1.4 percent for DTEP and 2.5 percent for AODA students. The adjusted effect of DTEP is statistically significant at the .05 level and represents a difference compared to the AODA students. It is expected that had DTEP students not experienced DTEP, they would have nearly twice the level of cocaine/crack use at follow-up. (Detailed results of these models are given in Appendix E.)

EXHIBIT III-6 EFFECT OF DTEP ON THE PERCENTAGE OF STUDENTS USING COCAINEKRACK BETWEEN JOB CORPS TERMINATION AND FOLLOW-UP INTERVIEW		
Percentage of DTEP students who had used cocaine/crack within 12-months prior to entering Job Corps	8.6%	
Standardized percentage of DTEP students who had used cocaine/crack post-termination from Job Corps	1.4%*	
Standardized percentage of AODA students who would have used cocaine/crackpost-termination from Job Corps	2.5%*	

^{*}significant difference between DTEP and AODA p<.05

At follow-up, comparable AODA students are about twice as likely to use cocaine/crack compared to DTEP students.

Binge Drinking

Binge drinking represents a serious misuse of alcohol and has been identified as a particular problem of adolescent and young adults. Prior and current levels of any alcohol use are high among both AODA and DTEP students; about 80 percent in both groups drink alcoholic beverages,. The results suggest no difference at follow-up between AODA and DTEP students in either their use of alcohol or in their alcohol binge drinking post-termination. (See Exhibit III-8.)

EXHIBIT III-7 Effect of DTEP on percentage of Job Corps students using cocaine or crack (self-report)

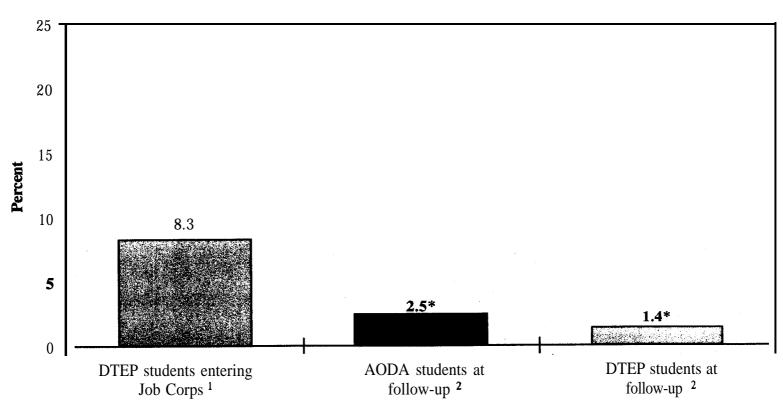


Table Notes:

- 1. Pre-program use in the 12 months prior to entering Job Corps; follow-up use since termination from Job Corps.
- 2. The percentage is standardized. The % difference between AODA and DTEP at follow-up represents the effect of DTEP adjusted for the average characteristics of enrollees in the DTEP program and the AODA value interpreted as the level of outcome had the students *not* received the DTEP program.

^{*} significant difference between AODA and DTEP p <.05

Some 27 percent of the DTEP students reported prior binge drinking. The observed standardized effect of DTEP shows about 25 percent had binge drank in the previous 30 days, while the comparable AODA group only binged 21 percent during this period. The difference is not statistically significant and shows no negative effect of DTEP on the misuse of alcohol.

EXHIBIT III-8 EFFECT OF DTEP ON ALCOHOL BINGE DRINKING WITHIN LAST 30 DAYS BEFORE FOLLOW-UP INTERVIEW		
Percentage of DTEP program students who binge drank alcohol within the last 30 days before entering Job Corps	27.3%	
Adjusted percentage of DTEP students who binge drank alcohol within the last 30 days before follow-up	25.3%	
Adjusted percentage of AODA students who binge drank alcohol within the last 30 days before follow-uo	20.6%	

^{*}significant difference between DTEP and AODA p<.05

Frequency and Extensiveness of Drug Use

An alternative outcome to abstinence for analyzing the effect of DTEP on drug use/abuse is to examine the frequency of use and the extensive nature of use (i.e., drug use frequency and types of drug used). There are significant effects of DTEP on the lowering of both frequency of marijuana use and on the extensive nature of drug use. (See Exhibit 111-9.) Upon termination, the standardized effect of DTEP shows students using marijuana less frequently compared to AODA students and being less extensively involved in drug use/abuse (e.g., using marijuana only at low frequency and not using opiates or other drugs). We detail frequency of marijuana use.

Exhibit 111-1 0 shows the distribution of frequency for marijuana use by DTEP and AODA students. **DTEP students have a much lower frequency of use and the effect of DTEP is statistically significant for reducing the percentage in both categories of weekly use and daily use. The standardized percentage using on a weekly or daily basis is 41.5 percent for DTEP and 51.1 percent for AODA students.** No difference between comparable AODA and DTEP occurs for occasional use (approximately once a month).

Similar results are obtained for intensity of use. DTEP has a significant effect in reducing the number at the moderate and extensive drug use categories, where extensive use is

characterized by use of other non-marijuana drugs or high frequency of marijuana use. The standardized percentage of DTEP students in the extensive category is 17 percent, while the standardized percentage for AODA students is 23 percent. The difference, 6 percent, represents a significant effect of DTEP in lowering extensive use of drugs. Similarly DTEP reduces moderate use by a statistically significant, nearly 3 percent (see Exhibit 111-1 1); albeit this effect is weaker than for reducing extensive use.

Overall, DTEP has a modest effect in reducing drug use measured as abstinence and a slightly stronger effect when evaluating frequency or extensive use of drugs. Clearly alcohol use is unaffected.

EXHIBIT III-9 EFFECT OF DTEP ON FREQUENCY OF MARIJUANA USE BETWEEN TERMINATION FROM JOB CORPS AND FOLLOW-UP INTERVIEW			
Percentage of DTEP students at different frequencies of marijuana use prior to entering Job Corps ³	9.8% none 36.0% occasionally 19.6% weekly 34.7% daily		
Standardized percentage of DTEP students at different frequencies of marijuana use at follow-up	44.9% none 13.6% occasionally 26.5% weekly* 15.0% daily*		
Standardized percentage of AODA students at different frequencies of marijuana use prior to entering Job Corps	37.5% none 11.4% occasionally 3 1.6% weekly* 19.5% daily*		

^{*}significant difference between DTEP and AODA p<.05

Comparable AODA students are significantly more likely to use marijuana on a weekly or daily basis than DTEP students.

The definition of frequency differed slightly **from** the initial questionnaire and the follow-up questionnaire. Pre-Job Corps responses include "one time only" in the occasional category; 1-2 days per week is considered 'weekly'; 3-6 days per week and daily use are combined as daily use. The follow-up questionnaire included a specific category of once a week (weekly); 2-4 times per week, 5-6 times per week, and daily were combined as daily use.

EXHIBIT III-10 Effect of DTEP on percentage of Job Corps students using marijuana weekly or daily

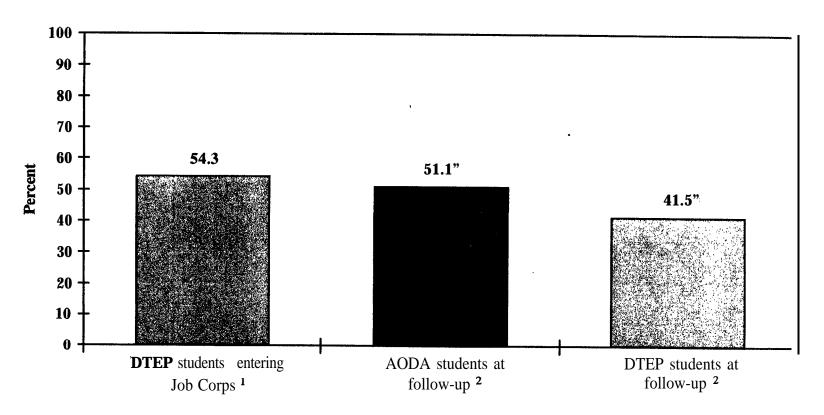


Table Notes:

- 1. Pre-program use in the 12 months prior to entering Job Corps; follow-up use between termination and interview.
- 2. The percentage is standardized.' The % difference between AODA and DTEP at follow-up represents the effect of DTEP adjusted for the average characteristics of enrollees in the DTEP program and the AODA value interpreted as the level of outcome had the students *not* received the DTEP program.

^{*} significant difference between AODA and DTEP p < .05

EXHIBIT III-11
Effect of DTEP on percentage of Job Corps students categorized as moderate to extensive drug users

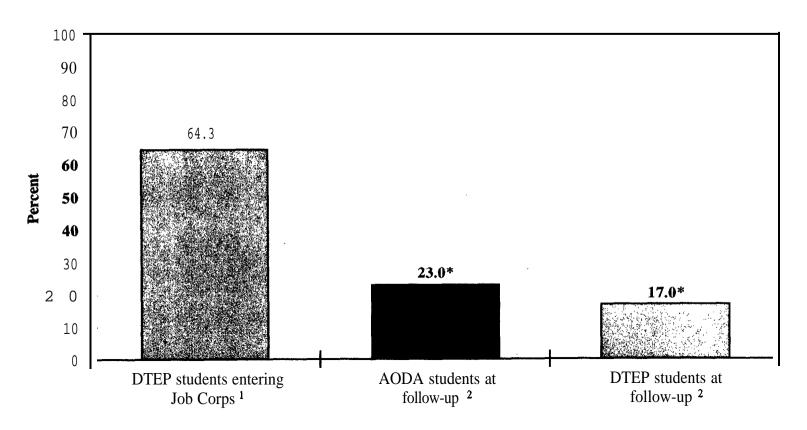


Table Notes:

- 1. Pre-program use in the 12 months prior to entering Job Corps; follow-up use since termination from Job Corps.
- 2. The percentage is standardized, The % difference between AODA and DTEP at follow-up represents the effect of DTEP adjusted for the average characteristics of enrollees in the DTEP program and the AODA value interpreted as the level of outcome had the students not received the DTEP program.

^{*} significant difference between AODA and DTEP p < .05

4.4 Additional significant results for marijuana use:

- Use is positively and significantly related to prior drug use, prior criminal activity, and mother's drug use
- Prior employment to Job Corps is significantly negatively related to posttermination marijuana use
- Reductions in marijuana use due to DTEP are slightly greater for males than females
- There is a strong interaction between prior criminal behavior and the negative effect of DTEP on post-termination marijuana use. For those with prior crimes, DTEP has a much weaker effect on use.

4.5 Additional significant results for cocaine/crack use:

- Prior selling of drugs is positively related to continued use of cocaine/crack
- Working prior to Job Corps negatively affects post-termination use.

4.6 Additional significant results for alcohol binge drinking:

- Prior.use of drugs and prior crimes are significantly positively related to recent binge drinking at follow-up
- Age is significantly positively related to recent binge drinking at follow-up; older students were more likely to binge drink controlling for other factors
- There is a significant interaction between **DTEP's** effect on binge drinking and the level of mental health. DTEP students with higher levels of mental distress show lower post-termination binge drinking.

4.7 Additional significant results for frequency of marijuana use:

- Prior crimes, prior selling of drugs, and mother's drug use are significantly positively related to higher frequency of use at follow-up
- Working prior to Job Corps has a significant negative effect on higher frequency of use.

5. EFFECTS OF DTEP ON MENTAL HEALTH PROBLEMS

One of the important components of DTEP was to provide individual and small group counseling to the students who were assigned to participate in DTEP. Data presented above show that indeed, DTEP provided more individual level counseling and more group level counseling to its participants than the AODA program. Furthermore, DTEP sought to enhance students' social contacts by providing life skills training and recreational activities with peers. Although the counseling program, educational program, and recreational program administered by DTEP focused on substance use issues, **it is likely that intensive therapy and management of social aspects of students' lives may have beneficial effects on the mental health of the DTEP students.** (See Exhibit 111-12.) In contrast, the AODA program was not designed to provide individual counseling to its participants, nor did it have a program to manage social and recreational activities. Therefore, as a secondary but direct effect of DTEP, we expect to see lower levels of mental health problems among DTEP students compared to the students in the AODA program.

The impact of DTEP on mental health problems is of interest because of three reasons:

- (1) It is well known that mental health status is associated with substance use. To the extent that the participants of DTEP have improved mental health, they will be less likely to develop a substance use problem after they exit Job Corps.
- (2) Individuals with clinical mental health problems are less likely to have a successful employment career and less likely to succeed in school than individuals who have better mental health. To the extent that DTEP can improve the mental health of its participants, it will be able to improve their longer term career outcomes as well.
- (3) If DTEP can be shown to reduce the need for mental health services, its benefits may include reducing the future mental health service use of the "at-risk" youths that it serves.

5.1 Measuring Mental Health Problems

At the time when the students were assessed for intake, and once again at the time of the follow-up survey, students were administered a comprehensive psychological assessment, entitled the Brief Symptom Inventory (BSI). The BSI assessment is a valid measure of mental health status often used for epidemiological purposes (i.e., to assess the mental

health of a group of individuals) and for assessing the clinical need of mental health services of individuals.⁴

EXHIBIT III-12 EFFECTS OF DTEP ON MENTAL HEALTH PROBLEMS MAIN FINDINGS

- Upon entry into Job Corps, 26.1% of all DTEP and AODA students show mental health problems, and 11.5% of DTEP and AODA students show clinically significant mental health problems
- At follow-up, 20.9% of DTEP students and 27.4% of AODA students show mental health problems
- The proportion of DTEP students who have clinically significant mental health problems is lower (8.5%) than the proportion of AODA students with such mental health problems
- The likelihood that a DTEP student will have a clinically significant mental health problem one year after termination from Job Corps is one-half of that for a comparable AODA student.

The BSI yields measures of nine specific dimensions of mental health, corresponding to three overall mental health indices and six measures of specific diagnoses, all of which are expressed as standardized scores where the reference population is a non-clinical sample of similar aged youths. The six specific measures are somatization, obsessive-compulsive symptoms, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation and psychoticism. A student who had a score over one standard deviation above the mean in any of the six diagnostic dimensions is indicated as *distressed in a diagnostic dimension*. A student who has a score of 63 or higher in the overall mental illness indicator or scores of 63 or higher in any two of the six symptom dimensions is indicated as a *clinical case*. A student who has an overall mental illness indicator that is over one standard deviation above the mean is indicated as having a *high overall level of symptoms*.

The measure of mental health status thus created yields four groups of students:

• Students who do not have **mental** health problems

The BSI is a measure of mental health that is based on 53 items that describe symptoms. Each student rates how much he or she was distressed by each symptom during the past 7 days on a5-point scale ranging from "not at all" to "extremely." The 53 items are then summed within 6 symptom groups and also to obtain the three overall measures of mental health These measures are often translated into T-scores. T-scores are standardized scores, where the standardization is conducted against the distribution of scores from a normative population, in this case, non-institutionalized youths (i.e., not mental health in-patients) of ages similar to Job Corps students. The mean of the standard score is 50, and the standard deviation is 10. A T-score of 50 indicates that the mental health status of a youth is the same as what would be expected of a non-institutionalized youth of similar age.

- Students who have elevated levels of symptoms in one of the six diagnostic dimensions
- Students who are indicated as clinical cases
- Students who are indicated as having high overall levels of symptoms.

The last two groups of students together constitute those who are indicated as having clinically significant levels of mental health problems, or as "cases." This measure may also be regarded as an indicator that a student is in need of mental health services. In this section the findings about the effects of DTEP on the clinical measure of "caseness" and the four-category mental health status measure are presented.

The clinical measure of "caseness" can be interpreted in two ways:

- (1) "Caseness" indicates impaired psychological, emotional and social functioning. A student who is assessed as a "case" presents a number of symptoms of mental health problems and/or reports a degree of severity of mental health problems to indicate that his or her functioning may be impaired.
- (2) **"Caseness" indicates the need for mental health services.** A student who is assessed as a "case" presents enough number and severity of mental health problems to indicate that he or she is likely to be in need of mental health services.

5.2 Statistical Methods for Evaluating DTEP

As indicated before, direct comparisons between AODA students and DTEP students are not a valid assessment of DTEP. In order to estimate the unique effect of DTEP on "caseness," a multivariate logistic regression model was used. This technique estimates the likelihood that an individual has mental health problems, controlling for "caseness" at the time of entry into Job Corps, effects of additional individual level characteristics, and program participation. Hence, the adjusted effect of DTEP can be estimated controlling for all other relevant characteristics of the student. The results are used to calculate the standardized percentages of DTEP and AODA students who would be assessed as having clinically significant levels of mental health problems. These percentages allow us to make comparisons since they adjust for the differences in the characteristics of DTEP and AODA students at the time of entry into Job corps.

In addition to the models estimating the effects of DTEP on the "caseness" of the students, we estimated models that predicted the four-category mental health status indicator. These models uses multivariate ordered **probit** model that predicts the underlying level of mental health' problems that yield the four-category ordinal measure. The resulting models yield findings that are very similar to those based on the analysis of the "caseness" indicator. For ease of interpretation, we present the findings based on the latter models.

5.3 Effects of DTEP

Exhibit III-13 and Exhibit III-14 compare the overall percentage of program students who were assessed to be clinical cases at the time of entry into Job Corps and the percentage who were cases at the time of follow-up. The overall percentage of cases (for both DTEP and AODA students) at the time of entry was 11.5 percent, with 10.7 percent for DTEP students and 12.5 percent for AODA students. An additional 15.1 percent of the DTEP students and 14.1 percent of the AODA students indicated an elevated level of distress in at least one diagnostic dimension. At the time of follow-up, the overall percentage of "caseness" was virtually unchanged for program students, at 12.1 percent.

EXHIBIT III-13 EFFECTS OF DTEP ON THE PERCENTAGE OF STUDENTS WITH CLINICALLY SIGNIFICANT MENTAL HEALTH PROBLEMS		
Percentage of DTEP students who had clinically significant mental health problems at the time of entry in Job Corps	10.7%	
Standardized percentage of DTEP students who have clinically significant mental health problems at the time of follow-up	7.3%*	
Standardized percentage of AODA students who have clinically significant mental health problems at the time of follow-up	13.1%*	

^{*}significant difference between DTEP and AODA p<.05

When we examine the results at the follow-up interview and appropriately adjust for the relevant characteristics of the students, the percentage of DTEP students who would be cases at the time of follow-up is 7.3 percent. The percentage for AODA students if they had the same characteristics as the DTEP students is 14.1 percent. In other words, for the same set of students, in the absence of DTEP, one would expect a rate of "caseness" of 14.1 percent.

EXHIBIT III-14 Effect of DTEP program on percentage of Job Corps Students evidencing mental health "caseness"

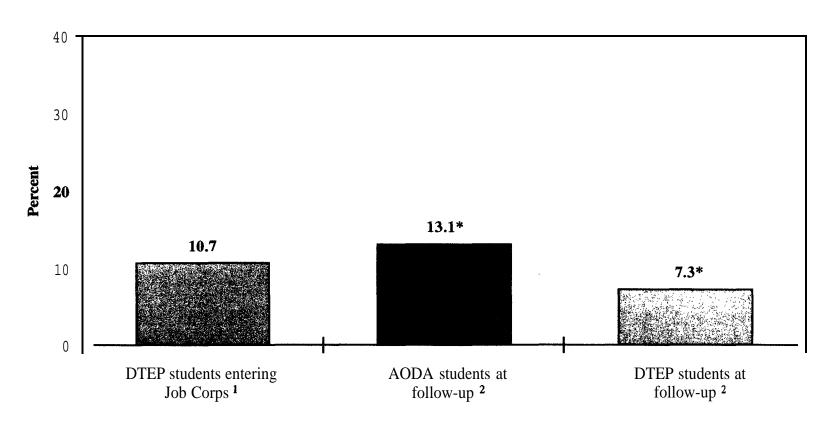


Table Notes:

- 1. Pre-program status upon entering Job Corps; follow-up status at interview.
- 2. The percentage is standardized. The % difference between AODA and DTEP at follow-up represents the effect of DTEP adjusted for the average characteristics of enrollees in the DTEP program and the AODA value interpreted as the level of outcome had the students *not* received the DTEP program.

^{*} significant difference between AODA and DTEP p <.05

On average, DTEP reduced the expected likelihood of occurrence of clinically significant mental health problems at follow-up by half.

The results indicate that DTEP made a substantial and statistically significant contribution to the mental health of its participants, as compared to the AODA program. Most important, DTEP reduced the likelihood that students would need mental health services by nearly one-half, diminishing the percentage with clinically significant mental health problems from an expected 14.1 percent to an expected 7.6 percent, based upon the distribution of the relevant characteristics of the students who participated in DTEP.

5.4 Additional significant results for mental health:

- Students who reported drug use by their mothers were significantly. more likely to be distressed at the time of the follow-up
- The ordered **probit** model indicated that the impact of DTEP is to reduce the underlying level of mental health problems by one-fifth of a standard deviation unit
- Given their initial level of mental health problems, at the time of follow-up, male students are significantly more likely to have mental health problems than female students.

6. EFFECTS OF DTEP ON CRIMINAL ACTIVITIES

As part of DTEP it was expected that additional changes in other behaviors, besides the' direct changes in drug use and abuse, would be observed. Although DTEP provided individual level counseling and group level counseling directed at drug use and abuse, components of this training would be expected to directly and indirectly reduce criminal behavior. If DTEP is successful in eliminating or reducing drug use, it would directly reduce students' involvement in crimes related to use and possibly remove students from criminal circumstances surrounding the use of drugs. In addition, benefits accrued from life skills training and better mental health may also help indirectly to reduce criminal behavior (e.g., a reduction in fights/assaults). We expect DTEP students to show significant reduction in their self-reported criminal acts and that this reduction will be significantly greater for DTEP versus AODA students. (See Exhibit III-15.)

We focus on two outcomes: (1) being arrested/jailed/booked post-termination, and (2) the selling or aiding in the sale, of drugs. The latter may represent the general removal of DTEP

students from drug use and associated drug culture/networks, while the former represents a general indicator of their criminal involvement.

EXHIBIT III-15 EFFECTS OF DTEP ON CRIMINAL, ACTIVITIES MAIN FINDINGS

- Nearly 32% of DTEP students report they had been arrested, jailed and/or booked 12 months prior to entering Job Corps; 18% reported selling or aiding in the sale of drugs.
- At follow-up, DTEP students show no substantial differences in self-reported criminal activities compared to AODA students.
- At follow-up, DTEP students show no substantial changes and no significant differences between AODA students in the likelihood of being arrested, booked, or jailed post-termination.
- At follow-up, DTEP students show a small but significant difference from AODA students in their likelihood
 of selling or aiding in the sale of drugs. Sixteen percent of DTEP students report selling drugs posttermination from Job Corps compared with 22% of AODA students.

6.1 Self-Report Measures of Criminal Behavior

Both criminal behavior measures are self-report measures taken from the respondents at the time of the follow-up interview (approximately one year post-Job Corps termination). DTEP and AODA students were specifically asked if they had ever been arrested, booked, or jailed since their termination from Job Corps. In addition, respondents were presented a list of 19 illegal activities ranging in behaviors from driving while under the influence to theft to homicide and asked if they had ever committed these acts since their termination from Job Corps. One of these items asked if the respondent had ever sold or helped in the preparation of selling drugs. We also examine whether respondents answer "yes" to any of the 19 illegal activities as an additional indicator of their criminal involvement.

6.2 Statistical Methods for Evaluating DTEP

We use multivariate logistic regressions to estimate the standardized effect of DTEP on either criminal behavior outcome. Direct comparisons of DTEP students and AODA students are not possible given initial differences among the students. The multivariate logistic models account for relevant demographic and social/economic background characteristics of the students and their program participation in DTEP or AODA. We include in the models past a measures of a student's criminal behavior and whether the student had sold drugs in the 12-month period prior to their entry into Job Corps. The models allow the calculation of a standardized percentage of DTEP students having been arrested or having sold or helped

sell drugs between termination and follow-up and a standardized percentage of AODA students having reported the same behaviors. as if both AODA and DTEP students had exactly the same relevant demographic and social/economic characteristics. (Detailed results of these models are in Appendix E.)

6.3 Effects of DTEP

The standardized percentages for AODA and DTEP students show similar levels of use between termination and follow-up compared to the prior 12 months to Job Corps entry for DTEP students. No statistically significant difference exists between AODA and DTEP students on whether they are arrested/booked/jailed, and, basically, no change in this experience occurs between pre-Job Corps and post-Job Corps for the DTEP group. A small statistically significant difference does occur for the specific reported crime of selling or aiding in the sale of drugs. DTEP students do report lower levels of involvement in the sale of drugs (16%) compared to AODA students (22%), albeit the difference is small.

Arrested/Booked/Jailed

The percentage experiencing arrests prior to entry into Job Corps and post-termination from Job Corps is given in Exhibit 111-16. Clearly, there is no substantive difference in this outcome either between DTEP and AODA students or from pre-Job Corps to post-termination interview. As an alternative measure of general criminal activity, we examined whether the students committed any of the 19 listed criminal offenses. Results were similar to that of arrests. No post-termination differences in self-reported criminal activity between AODA and DTEP exist. (See Appendix E, for details).

EXHIBIT III-16 EFFECTS OF DTEP ON BEING ARRESTED, BOOKED, OR JAILED	
Percentage of DTEP students who reported being arrested/booked/jailed 12 months prior to entering Job Corps	31.5%
Standardized percentage of DTEP students who reported being arrested/booked/jailed post-termination from Job Corps	31.9%
Standardized percentage of AODA students who reported being arrested/booked/jailed post -termination from Job Corps	32.2%

^{*}significant difference between DTEP and AODA p<.05

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No differences between DTEP and AODA students were found for arrests. Approximately 32 percent in either group had experienced being arrested, booked, or jailed after their termination from Job Corps. We also examined the outcome of whether students committed any criminal offense and also found no significant effect of DTEP in reducing criminal activities. Standardized percentages (not shown in the table) indicated about 59 percent of DTEP students and 61 percent of AODA students reported being involved in at least one of 19 possible criminal acts.

Selling or Aiding in the Sale of Drugs

Approximately 18 percent of DTEP students reported selling drugs or aiding in the sale of drugs within 12 months before enrolling in Job Corps. Upon termination the reported level of this offense differed significantly between DTEP (16.1%) and AODA (21.8%). DTEP students were less involved in drug traffic than AODA students by about 6 percent. This represents a statistically significant departure and significant effect of DTEP on this particular criminal behavior.

Direct comparisons using the adjusted percentages between DTEP and AODA students show a level of 16.1 percent for DTEP and 21.8 percent for AODA students. As shown in Exhibit III-17 and Exhibit 111-18, the effect of DTEP is statistically significant at the .05 level and represents about a 6 percent difference in the involvement in selling drugs. (Detailed results of these models are given in Appendix E.)

EXHIBIT III-17 EFFECTS OF DTEP ON REPORTED SELLING OR AIDING IN THE SALE OF DRUGS				
Percentage of DTEP students who reported selling or aiding in the sale of drugs 12 months prior to entering Job Corps	18.1%			
Standardized percentage of DTEP students who reported selling or aiding in the sale of drugs between Job Corps termination and follow-up				
Standardized percentage of AODA students who reported selling or aiding in the sale of drugs between Job Corps termination and follow-up.	21.8% *			

^{*}significant difference between DTEP and AODAp<.05

Comparable AODA students are 'more likely to have sold or participated in the selling of drugs post-termination from Job Corps compared to DTEP students.

EXHIBIT III-18 Effect of DTEP on percentage of Job Corps students reporting selling or aiding in the sale of drugs (self-report)

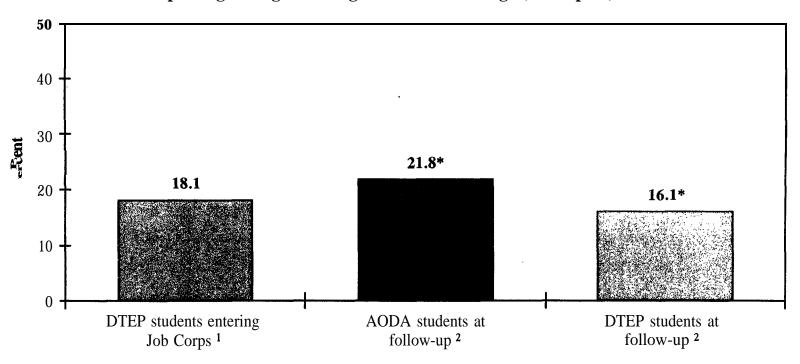


Table Notes:

- 1. Pre-program behavior in 12 months prior to entering Job Corps; follow-up behavior since termination from Job Corps.
- 2. The percentage is standardized. The % difference between AODA and DTEP at follow-up represents the effect of DTEP adjusted for the average characteristics of enrollees in the DTEP program and the AODA value interpreted as the level of outcome had the students *not* received the DTEP program.

^{*} significant difference between AODA and DTEP p < .05

6.4 Additional significant findings for ever arrested/booked/jailed:

- Arrests are positively and significantly related to previous criminal behavior
- Males are **significantly** more likely to have been arrested/booked/jailed than females
- Age is negatively and significantly related to being arrested/booked/jailed
- Prior employment is weakly negatively related to being arrested/booked/jailed
- There is a weak interaction between DTEP and mental health status in which the effect of DTEP reduces arrests for those who evidence higher levels of mental distress.

6.5 Additional findings for selling or aiding in the sale of drugs:

- Individuals with previous criminal offenses or individuals who previously report selling drugs are significantly more likely to sell or aid in the selling of drugs post-termination from Job Corps
- Males are more likely than females to be involved in selling drugs
- Living with parents between the ages of 6 and 14 is weakly and negatively related to selling drugs.

7. **EFFECTS OF DTEP ON PLACEMENT, EMPLOYMENT, AND EARNINGS**

There are a number of important interrelated economic goals of Job Corps that directly affect the overall success of Job Corps students. Among these are (1) initial job placement, (2) initial wage rate, (3) consistent employment, and (4) overall earnings. DTEP is expected to improve the likelihood of success in these four arenas by altering the students' drug related behaviors but **also** by having provided general skills as part of DTEP. First, to the extent that illicit drug use is an impediment to successful placement and employment, and to the extent that DTEP helped reduce the drug involvement of its participants, it is expected to improve these outcomes. Second, to the extent that mental health problems are an impediment to successful placement and continued employment, and to the extent **that** DTEP helped reduce mental health problems of its participants, it is expected to improve the placement outcomes. Third, to the extent that DTEP helped its participants benefit from the educational programs and vocational training offered in the Job Corps program, and to the extent that the education and training of the students help improve their chances of successful placement and employment, DTEP is expected

to improve placement and employment outcomes. The impact of DTEP on the placement employment, wages, and earnings from these successful placements is indirect as a result of DTEP's direct effect on the individual's drug behaviors, mental health, and general skills.

In sum, the impact of DTEP on the post-program placement, wages, earnings and employment is likely to be indirect and small; however, these additional effects, beyond those directly related to drug use/abuse, indicate further value of DTEP. (See Exhibit 111-19.) DTEP students are expected to have better initial placement, earn higher first wages, be employed at higher rates, and earn more income compared to comparable AODA students.

EXHIBIT III-19 EFFECTS OF DTEP ON PLACEMENT, EMPLOYMENT AND EARNINGS M A I N F I N D I N G S

Placement:

- *The* differences between DTEP students and AODA students in the likelihood of being placed in a school on in a job are not significantly different.
- DTEP students who had mental health problems at the time of entry into Job Corps have significantly higher likelihood of placement than comparable AODA students.

First wages:

• *The* difference between DTEP students and AODA students in the wage rate of the first job after termination from Job Corps is not significantly different.

Employment and earnings:

- At follow-up, DTEP and AODA students show no substantial difference in their reported employment between Job Corps termination and interview.
- · At follow-up, DTEP and AODA students show no difference in their reported total yearly earnings.

7.1 Measures of Job Placement

Subsequent to termination from Job Corps, students may be placed in higher education, in a job or in the Armed Forces. Alternatively, the student may not have attained any of these placements. The placement status of Job Corps students are tracked by placement contractors. The placement contractors have up to eight months after termination to record the placement outcome for a student. For about 5 percent of the students the placement status is unknown although the eight-month window after the termination has expired. In the analyses that follow, these students are assumed "not placed." From this **information** we consider three possible outcomes of the placement process: (a) The student is successfully placed in higher education, in

a job, or in the military; (b) the student is not placed; or (c) placement status of the student is unknown because the eight-month window has not expired.

7.2 Measuring Wage Rate of First Job

Subsequent to termination, for the students who were placed in a job, the wage rate earned in that job is recorded by the placement contractor. Similar to the placement data (described above), the placement contractors have up to eight months after termination to record the wage rate for a student. Hence, the wage information is available only for those students whose placement status is known and who are placed in a job or in the military (rather than in higher education). We refer to the wage rate reported by the placement contractor as the wage rate on the first job.' In the analyses that follow, wage rates are analyzed conditional on the placement in a job or in the military.

7.3 Employment History and Earnings

Job Corps students at the follow-up interview provide a detailed accounting of the jobs (part-time and full-time) they have held since termination from Job Corps. Included in this account is a detailed list of their wages and earnings by job and the hours worked (both regular and overtime hours). We use these measures to construct their total earnings over all jobs for the first 12-month period after their termination from Job Corps. In addition, for all students we record whether they are currently employed or ever employed between termination and follow-up. These measures provide sets of indicators of DTEP's additional impact on employment and earnings.

7.4 Statistical Methods for Evaluating the Effect of DTEP

The analyses for each set of outcomes above are based on the general approach outlined in our introduction to our analysis strategy. For placement, we use multinomial logistic regression, which allows us to consider all three possible outcomes (no placement, education/job/military placement, and unknown placement) simultaneously. For first wage, the

It is very likely that the job reported by the placement contractor is, indeed, the first jobafter termination. On the other hand, the students who were not located by the placement contractors may have found jobs and may be earning wages that are not reported by the placement contractor. In interpreting the findings reported in this section this caveat must be considered. Although the follow-up survey yields information on wages as well, the information available from the Job Corps placement contractors is available for all students, not only those who are included in the follow-up sample. The analysis of the data **from** all new students who enrolled in the study centers is valuable since these data are not subject to possible errors introduced due to non-response.

model is more complicated to account for whether a wage rate is observed for a given individual. Whether the wage rate is observed depends on whether a student obtained a job and whether the placement is recorded by the placement contractor as well as how recently the. student terminated from Job Corps. We developed a two-stage estimation process, often referred to as a *selection model*, using a multinomial multivariate logistic regression model to estimate the likelihood of an observed job placement and using a linear regression model to estimate the effect of DTEP on first wage accounting for type of placement. For employment status, logistic regression models (similar to those for marijuana use) are used, and for earnings a multiple regression model is used.

All models include the treatment effect (DTEP or AODA) to test the effect of DTEP on the outcome of interest. In addition, each model includes a set of controls for basic demographic characteristics (e.g., age at the time of entry, gender), initial economic characteristics of the student (e.g., whether the student has a high school diploma or a GED at the time of entry or whether the student worked during the 12-month period preceding entry into Job Corps), and additional relevant behavioral and status characteristics of the student (e.g., self-reported drug use status of the student at the time of entry; whether the student ever committed a criminal act prior to entry into Job Corps). Additional controls unique to each outcome are also used (e.g., local area unemployment rates or effects of a specific Job Corps center). The models are fully described and their detailed results provided in Appendix E and Appendix F, respectively.

Results from each model allow a calculation of a standardized (percentage or amount) effect of DTEP. These standardized effects can be interpreted as the estimated value (e.g., percentage successfully placed or first wage in dollars) for DTEP students and AODA students as if the DTEP and AODA students had identical background, center, and local area characteristics. Differences in the standardized values specifically reflect the impact of DTEP.

7.5 Effects of DTEP

Both AODA students and DTEP students show similar levels of placement, first wage, employment, and total earnings. There is no statistically significant difference between AODA and DTEP students on their first wage, whether they were ever employed during the period or currently employed at the time of the follow-up interview, or on their annual earnings. Placement shows no significant differences between AODA and DTEP students, except for a strong effect among students who had mental health problems at the time of entry into Job Corps; this sub-group of DTEP students show much better placement (76% successful

placement) compared to comparable AODA students (61%). Below we provide more detailed results for each outcome.

Placement

A higher percentage of DTEP than AODA students were not successfully placed (35.2% versus 30.0%). The proportion of DTEP and AODA students who had unknown placement outcomes due to recent termination from Job Corps were roughly equal. The differences between DTEP and AODA students' placement rates were mostly due to job placements rather than school placements. Forty-eight percent of the DTEP students and 55.6 percent of the AODA students were successfully placed. However, the difference in job placement rates between DTEP and AODA students are mostly due to the differences in their background characteristics and the differences in the local area characteristics that put DTEP students at a disadvantage. For example, a lower proportion of the DTEP students were employed prior to entry in Job Corps and there is a higher proportion of extensive drug users in DTEP than the AODA program. Furthermore, DTEP students are, on average, in areas that have somewhat higher rates of unemployment (7.5%) than the AODA students (6.7%).

Exhibit II-20 and Exhibit III-2 1 provide the standardized percentage of successfully placed DTEP and AODA students. Almost two-thirds of the DTEP and comparable AODA students (standardized percentages of 63.3% and 62.3%, respectively) are estimated to be successfully placed in higher education, in jobs or in the military after termination from Job Corps. The difference between the two groups is not statistically significant. However, the DTEP participants who have mental health problems have substantially and significantly better chances of successful placement than the AODA participants who have mental health problems.

EXHIBIT III-20 EFFECTS OF DTEP ON PLACEMENT OF STUDENTS AFTER TERMINATION				
Standardized percentage of DTEP students successfully placed after termination	63.3%			
Standardized percentage of AODA students successfully placed after termination	62.3%			
Standardized percentage of DTEP students with elevated levels of mental health problems successfully placed after termination	75.9% *			
Standardized percentage of AODA students with elevated levels of mental health problems successfully placed after termination	60.7% *			

^{*}significant difference between DTEP and AODA p<.05

EXHIBIT III-21
Effect of DTEP on percentage of Job Corps students successfully placed after termination

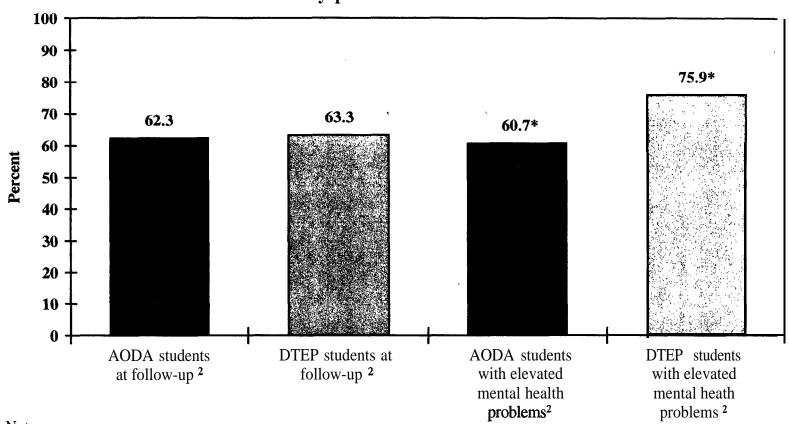


Table Notes:

- 1. We include successful placement results for both AODA and DTEP students and results specific to AODA and DTEP students with elevated mental health problems. The latter shows significant differences between AODA and DTEP on placement for this subgroup.
- 2. The percentage is standardized. The % difference between AODA and DTEP at follow-up represents the effect of DTEP adjusted for the average characteristics of enrollees in the DTEP program and the AODA value interpreted as the level of outcome had the students *not* received the DTEP program.

^{*} significant difference p < .05

For students with mental health problems there is a statistically significant and large effect of DTEP on successful placement compared to AODA.

It is estimated that DTEP students who had mental health problems prior to entry in Job Corps have significantly better chances of placement than comparable AODA students. The estimated standardized percentage of placement for the DTEP students who have an elevated overall level of symptoms indicating mental health problems is 75.9 percent compared to 60.7 percent for AODA students.

The findings of these analyses show the DTEP not only has beneficial effects on the mental health status of its participants (see Section 2), but it has a secondary beneficial effect for the students with mental health problems in terms of their placement after they terminate from Job Corps. These secondary beneficial effects are not observed for the AODA students. These differences are likely to be due to the nature of DTEP in terms of its intensive individual and group counseling that targeted primarily drug use but also addressed other adjustment problems of its participants.

First Wage Rates

The mean wage rate earned by DTEP students is slightly higher than that earned by AODA students (\$5.59 versus \$5.49), although this difference is not significant. Non-program students (not in AODA or not in DTEP) earn an average of \$5.60, and this average is not significantly different from the average wage rate for either AODA or DTEP students.

Exhibit III-22 provides the standardized average wage rates estimated for DTEP and AODA students. These standardized averages are not affected by the differences between the characteristics of DTEP and AODA students, the differences between the students for whom placement status is known and those for whom this status is not known, or the differences in the characteristics of the local areas of DTEP and AODA students that may influence their wage rates. These wage rates are not significantly different.

EXHIBIT III-22 STANDARDIZED AVERAGE WAGE RATES OF DTEP AND AODA STUDENTS IN THE FIRST JOB AFTER TERMINATION

Standardized average wage rate estimated for DTEP students	§5.10
Standardized average wage rate estimated for AODA students	\$5.02

^{*}significant difference between DTEP and AODA p<.05

Currently Employed

The percentage of DTEP students who were employed within 12-months of their entry into Job Corps and their current employment status at the follow-up interview are given in Exhibit 111-23. Clearly, there is no substantive difference in this outcome either between DTEP and AODA students or from pre-Job Corps to post-termination interview. An additional measure of any employment between exit and follow-up interview similarly shows no difference. (For details of these models, see Appendix E.)

EXHIBIT III-23 EFFECT OF DTEP ON PERCENTAGE OF STUDENTS REPORTING AN-Y OR CURRENT EMPLOYMENT				
Percentage of DTEP program students who reported any employment within 12 months prior to entry into Job Corps	49.7%			
Standardized percentage of DTEP students who reported being currently employed at the follow-up interview	37.8%			
Standardized percentage of AODA students who reported being currently employed at the follow-up interview	37.9%			
Standardized percentage of DTEP students who reported any employment between termination and follow-up interview	79.4%			
Standardized percentage of AODA students who reported any employment between termination and follow-up interview	77.5%			

^{*}significant difference between DTEP and AODA p<.05

Current levels of employment for both AODA and DTEP students are just under 40 percent. There are no significant effects of DTEP. In addition, there are no differences in AODA and DTEP in the level of employment between termination and follow-up interview; in both groups about 80 percent have been employed at some time during this period. There are no

significant effects of DTEP on either of these outcomes though there is a general increase in the amount of employment both groups have experienced..

Total Earnings 12-Months Post-Termination

Approximately 80 percent of the DTEP students were employed at some point post-termination from Job Corps. Below we report the effects of DTEP on total earnings for the first 12 months after termination. The difference between DTEP and AODA represents a standardized difference in dollars earned for that 12 month period. There are no statistical or substantive differences.

The increment gained by DTEP students is approximately \$68. The net dollar effect of DTEP on total earnings in the first year since termination from Job Corps is small and not significantly different from zero. (See Exhibit 111-24.) Yearly earnings are just below \$4,000 for both DTEP and AODA groups. (Detailed results of these models are given in Appendix E.)

EXHIBIT III-24 EFFECT OF DTEP ON THE YEARLY EARNINGS OF STUDENTS				
Expected standardized first-year earnings for DTEP students	\$3,917			
Expected standardized first-year earnings for AODA students	\$3,849			
Difference (in dollars) for DTEP vs AODA students for total earnings in the first 12 months since termination from Job Corps	\$ 68			

^{*}significant difference between DTEP and AODA p<.05

7.6 Additional significant effects on placement:

- Male students are significantly more likely to be successfully placed
- Students who had a GED or a high school diploma at the time of entry are significantly more 'likely to be placed
- Students who self-reported drug use at the time of entry in Job Corps are significantly less likely to be placed
- Students who worked during the 12-month period prior to entry in Job Corps are significantly more likely to be placed

• Students in the areas of high unemployment rates are significantly less likely to be placed.

7.7 Additional significant results for first wage:

- Older students and male students have significantly higher wage rates than younger students and female students
- Hispanic students have significantly higher wage rates than white, non-Hispanic students, controlling for other relevant characteristics
- Students who had a GED or a high school diploma at the time of entry into Job Corps have significantly higher wages than those who did not have a high school degree
- Students who self-reported extensive drug use at the time of entry in Job Corps and students who had a severe disruption in-their family lives have lower wages than others
- Students who worked during the 12-month period prior to entry in Job Corps have significantly higher wage rates
- Students in the areas of high unemployment rates have significantly lower wage rates, and students who are from areas with higher average wages have higher wage rates.

7.8 Additional significant results for employment:

- Current employment at the time of the follow-up interview is positively related to age, previous work experience, and being non-Hispanic white
- Current employment is negatively related to being Hispanic or non-Hispanic black, and to the unemployment rate in the local labor market.

7.9 Additional significant results for total first year earnings:

- Total earnings are positively and significantly related to age, being male, non-Hispanic white, and previous employment in the year before Job Corps.
- Total earnings decrease significantly for Hispanics and non-Hispanic blacks (compared to non-Hispanic whites) and are negatively related to the level of unemployment in the individual's local area labor market.

8. EFFECTS OF DTEP ON THE USE OF WELFARE

As for other non-drug outcomes we expect the elements of DTEP to have indirect effect on use of welfare. This is related to lowering drug behaviors and increasing positive mental health status and is likely related to the increased personal and social skills that were part of DTEP. We expect DTEP students to show significantly reduced welfare use compared to AODA students. We focus on any use of welfare from Job Corps termination to follow-up interview. (See Exhibit III-25.)

EXHIBIT III-25 EFFECTS OF DTEP ON THE USE OF WELFARE MAIN FINDINGS

- At follow-up, DTEP students show substantial differences in reported use of general assistance, food stamps, and Medicaid compared to AODA students.
- About 33% of DTEP students used welfare between termination and follow-up, compared to 42% of comparable AODA students. The 9% difference is statistically significant.

8.1 Measures of Welfare Use

Respondents at the time of the follow-up interview (approximately one year post-Job Corps termination) were asked if they had ever used general assistance or general relief, food stamps, or Medicaid at any time since they left Job Corps. If any of these were used, the respondent was considered to have used some form of welfare.

8.2 Statistical Methods for Evaluating **DTEP**

We use multivariate logistic regressions to estimate the standardized effect of DTEP on welfare use. The multivariate logistic models account for relevant demographic and social/economic background characteristics of the students and their program participation in DTEP or AODA, including past work experience and their education at entry. We also include in the model local labor market characteristics (level of unemployment and local wage rates) and the length of time. between termination and follow-up interview. The models allow the calculation of a standardized percentage of DTEP students having used welfare between termination and follow-up and a standardized percentage of AODA students having reported welfare use as if both AODA and DTEP students had exactly the same relevant demographic and social/economic characteristics. (Detailed results of these models are in Appendix E.)

8.3 Effects of DTEP on Welfare Use

The standardized percentages for AODA and DTEP students show difference in the level of welfare use between termination and follow-up. (See Exhibits III-26 and 111-27.) There is a statistically significant difference between AODA and DTEP students on whether they had used either general assistance, food stamps and/or Medicaid. About 33 percent of DTEP students report using welfare compared to 42 percent for AODA students. The 9 percent difference in welfare use is statistically significant and indicates a positive outcome of DTEP. DTEP students were less likely to use welfare. (See Appendix E for details).

EXHIBIT III-26 EFFECT OF DTEP ON THE PERCENTAGE OF STUDENTS WHO USED WELFARE BETWEEN JOB CORPS TERMINATION AND FOLLOW-UP INTERVIEW				
Standardized percentage of DTEP students who reported welfare use post-termination from Job Corps	33.4*			
Standardized percentage of AODA students who reported welfare use post-termination from Job Corps	41.6*			

^{*}significant difference between DTEP and AODA p<.05

DTEP students are significantly less likely to have used welfare between their termination from Job Corps and follow-up compared to AODA students.

8.4 Additional significant findings for welfare use:

- Welfare use is positively and significantly related to previous criminal behavior, being female, age, and the level of unemployment in the local labor market
- Hispanics and non-Hispanic blacks were more likely to have used welfare than non-Hispanic whites
- Welfare use is significantly negatively related to prior work experience and males were significantly less likely to use welfare between termination and follow-up.

EXHIBIT III-27 Effect of DTEP on percentage of Job Corps students using welfare between termination and follow-up

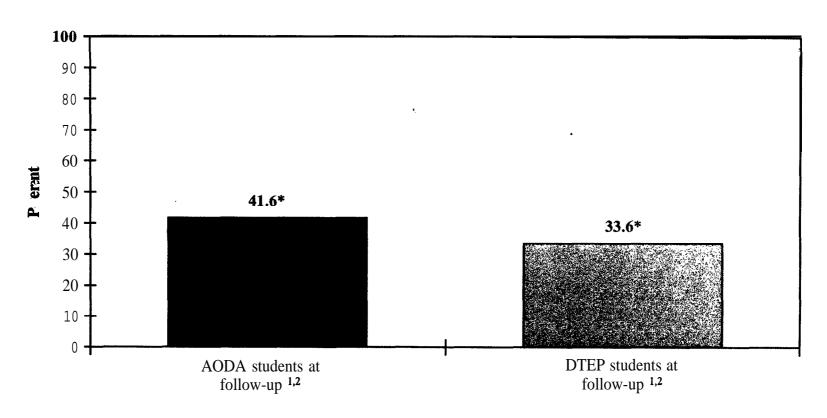
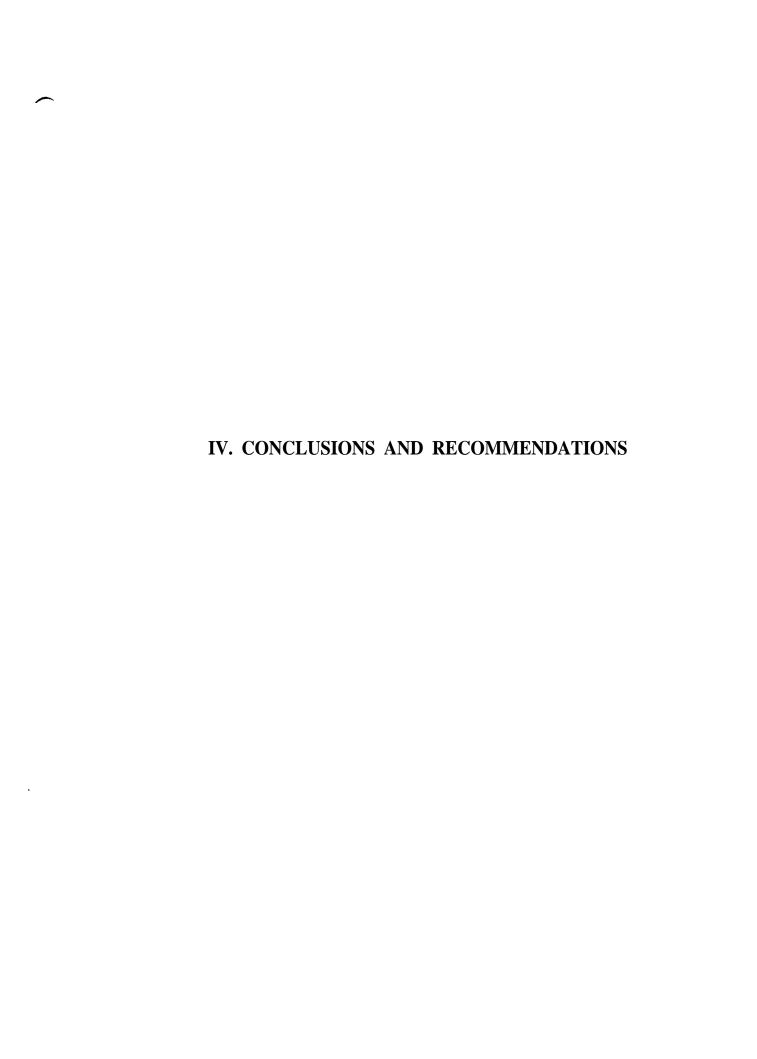


Table Notes:

- 1. Use between termination and follow-up.
- 2. The percentage is standardized.. The % difference between AODA and DTEP at follow-up represents the effect of DTEP adjusted for the average characteristics of enrollees in the DTEP program and the AODA value interpreted as the level of outcome had the students *not* received the DTEP program.

^{*} significant difference between AODA and DTEP p <.05



IV. CONCLUSIONS AND RECOMMENDATIONS

The preceding chapters up-dated DTEP operations assessments and presented detailed findings from the analyses of the Job Corps follow-up and outcome data. An analysis of validity and reliability issues also are presented in Appendix B. The purpose of this chapter is to provide conclusions based on these findings. Recommendations derived from these conclusions are presented at the end of the chapter.

1. CONCLUSIONS

Conclusions related to DTEP operations, the validity and reliability of the evaluation, and the extent to which the data can be generalized to Job Corps as a whole are presented.

1.1 Conclusions Related to DTEP Operations

As described in earlier annual reports, DTEP was implemented and operating reasonably well in the four experimental centers by early 1993. Several operational issues continued, however, and potentially could have negatively affected the impact of DTEP.

DTEP Management

The organizational location of DTEP within the center's operations continued to be a problem. In the fall of 1994, the DTEP teams were organizationally relocated to Health Services; the Health Services manager became responsible for overall DTEP management as well as for certain DTEP functions such as biochemical testing and student files. In spite of the reorganization, issues persisted. At two centers, DTEP staff reported a diminishing sense' of management support for the program.

DTEP Staffing

Program benefits are related to **staff turnover**; low levels of turnover minimize gaps in service. Unfortunately, however, DTEP teams experienced relatively high turnover rates at three centers and long periods of time between staff replacements at one center.

Program Operations and Costs

Based on available cost information (for 1994), which was not sufficient to support a detailed assessment of AODA budget allocations and DTEP expenditures, the average allocation per student slot at the experimental centers was \$736 as compared with \$258 at the control centers. During the time period for which cost data are available, the average monthly DTEP participation was 149 students as compared to 112 students in AODA. Based on participation, the average resource per program participant per month was \$177 for DTEP and \$83 for AODA. When participation rates are factored, DTEP was approximately twice as resource intensive as AODA.

1.2 Conclusions Related to the Validity and Reliability of the Evaluation

The accuracy of the evaluation findings depends on the extent to which the study; as implemented, meets certain general validity and data reliability requirements. The following conclusions are based on extensive analysis of the Job Corps centers, their students, and data sources used in the evaluation:

- Based on comparisons of students enrolled in the study centers with students enrolled at other Job Corps centers during the same period, it can be suggested that the results are potentially generalizable to Job Corps centers operated by private contractors, but not strictly to all Job Corps centers. Students in the study tended to be more representative of minorities, have a somewhat lower average reading level, be from large urban areas, and have fewer instances of previous employment. Job Corps centers that may not be representative are centers operated by the Civilian Conservation Corps, which tend to serve youth most of whom are white and most of whom come from small urban and rural areas.
- The eight centers do appear to be representative of groups of centers for testing the effectiveness of a drug treatment intervention program, given that prior studies have indicated a positive relationship between urban residence and the probability of substance use.
- The overall enrollment rate of students into the study (i.e., students completing the IAP-I) is approximately 81 percent, which while reasonably good, differs between the experimental (88%) and the control (74%) centers. These differences appear to be attributable to the exclusion of youth who need a bilingual program, thus limiting the interpretableness of the results to youth who do not need a bilingual program.

- Of the four primary data sources (LAP-I, IAP-T, IAP-F, and SPAMIS) only the IAP-I and SPAMIS are available for all students who were enrolled in the study. Data from the IAP-T are only available for a subset of relatively long-term stayers, and the IAP-F data appear to be biased towards relatively short-term stayers.
- Data from the IAP-I appear to have reasonably high reliability and validity based on interviewer confidence. DTEP assessors show the highest concern for student truthfulness, which most likely reflects the fact that the reported information was directly used to assess needed services. At AODA centers, the IAP-I was inconsequential to a student being assigned to AODA.
- SPAMIS data are believed to be highly reliable; potential threats to the reliability include irregularities among screening and placement agency forms and the high turnover rates of data clerks in Job Corps centers who are responsible for maintaining SPAMIS records on center.

Overall, the validity and reliability of the DTEP evaluation processes and data are relatively high.

1.3 Conclusions Based on Final Analyses

On the basis of the IAP-F data collected on the students who were given follow-up interviews and the data from SPAMIS on all DTEP and AODA enrollees, the following conclusions are drawn:

- The nature of the follow-up survey should be considered in interpreting the results of the analyses presented in this report. The interview schedule was based on all interviews being conducted during a specified time period with students who had been out of Job Corps at least 12 months. Longer-term stayers (enrolled before March 1994) who were eligible for follow-up had a significantly higher duration of stay in Job Corps (median of 105 days) than shorter-term stayers (enrolled in or after March 1994, median of 7 1 days). Because the longer-term stayers who had less than a year post-Job Corps were not interviewed, it is more likely that the results in this report are skewed towards short-term rather than long-term stayers. It is expected that DTEP benefits would have been more manifest in the longer-term stayers, therefore, the inferences from the follow-up survey are likely to under estimate the true impacts of DTEP.
- DTEP reduced drug use post-Jobs Corps, When compared to the reported level of drug use one-year prior to Job Corps, both DTEP and AODA students reported lower levels of drug use, but DTEP students reported reduced marijuana use more often than did AODA students by a factor of 6 percent. DTEP students were also twice as likely as AODA students to report a reduction in crack/cocaine use. Among students who reported continued drug use, DTEP students were

significantly less likely to report engaging in moderate to extensive use of marijuana and less likely to use other drugs. No differences were found between DTEP and AODA students in misuse of alcohol.

DTEP improved students' mental health. DTEP students were one-half as likely as AODA students to exhibit clinically significant mental health problems (based on the BSI) one year after termination from Job Corps.

DTEP reduced criminal activities related to the selling of drugs. Significantly fewer DTEP students reported selling or aiding in selling drugs post-Job Corps. No differences between DTEP and AODA students were found related to other criminal involvement.

DTEP did not appear to provide an added benefit in the areas of job placement, first wage after Job Corps, or total earnings after Job Corps, except when a student had mental health problems. For students with mental health problems, DTEP students had a significantly higher placement rate.

- DTEP resulted in reduced use of welfare. Significantly fewer DTEP students reported using general assistance, food stamps and Medicaid in the year after termination from Job Corps.
- DTEP did not appear to contribute to longer stays in Job Corps although DTEP students had significantly lower rates of dropout during the second month of their stay in Job Corps.
- DTEP did not appear to contribute to educational gains during Job Corps. No differences in rate of GED or high school degree attainment or reading gains of at least one grade level. AODA students showed higher mathematics gains, i.e., more AODA students showed improved mathematics scores of at least one grade level.
- DTEP did not appear to contribute to gains in completion of vocational programs during Job Corps. No differences were found between the number of DTEP and AODA students who completed vocational training.

Based on the above, DTEP was moderately successful in its primary focus of reducing drug use for marijuana and even more successful in reducing the use of other types of drugs. In addition, DTEP was very successful with youth whose drug problems were complicated by mental health problems as well. With respect to outcomes in which DTEP would not be expected to exert a major **influence** but could have an indirect effect, no additional benefits of DTEP were observed (i.e., DTEP did not make a difference in the areas of employment after Job Corps or educational gains during Job Corps). It was noted, however, that longer-stayers who were selected for follow-up but did not get interviewed because they had not been out of Job

Corps at least 12 months, were underrepresented in the follow-up sample. The result could be an underestimation of **the** effects of **DTEP**.

2. RECOMMENDATIONS

The following are recommendations suggested by the study results.

2.1 Integration of DTEP

In a study of this type where a program is only a small and specialized part of a much larger program, and where the goals of the specialized program are not always perceived as being relevant to the desired outcome of the larger program, it may be difficult to successfully integrate the two. This demonstration highlighted some of those problems. Not all center staff agreed that helping youth with drug problems was related to their eventual success in becoming employed. It was observed, however, that youth with drug problems are the earliest to leave and, therefore, do not benefit from job training. In addition, reluctance on the part of other center staff and youth to accept the DTEP program because it was not permanent and would eventually go away was noted. Difficulty in deciding where the program belonged within the center led to moving the program from one department to another. Full integration needs to occur such that these types of issues are resolved or ameliorated to the extent possible, otherwise, the success of the project may be limited.

2.2 Mental Health and Drug Use/Abuse

The success of DTEP in helping youth who had both drug use/abuse and mental health problems was the most significant difference between DTEP and AODA and demonstrated a need that is not met by the current AODA program. The reduction in drug use, additional probability of job placement, and reduction in mental health needs are all both cost beneficial and beneficial to society as a whole. An enhancement of AODA to meet these students needs is recommended.

2.3 Low Response Rate of IAP-Ts

Throughout the life of the project, the in-treatment (IAP-T) interviews were difficult to obtain. A major problem early on was that students left before the Assessment Specialists could conduct the interviews because the Assessment Specialists were not in the "check-out" loop. Attempts to address this issue were made by Job Corps center staff and by Assessment Specialists but the response rate remained low. Had the in-treatment interviews been available

on a sufficient number of youth, the question of attitudes about the two programs and attitude changes due to the programs could have been addressed. Because motivations and attitudes have been demonstrated to be important to making behavioral changes, it is recommended that mechanisms be added in future studies to ensure that these type of data be adequately collected and time be allowed to ensure that the mechanisms are properly working.

2.4 Loss of Follow-up of Longer-Term Stayers

As originally envisioned, the follow-up time period would most likely have been adequate to incorporate most of the long-term stayers, but DTEP evaluations conducted at the end of the first year indicated that the program was'not operating as intended and corrections needed to be made. In addition, changes within the centers that affected DTEP continued to be made throughout the course of the demonstration project. Revisions also were needed in the IAP-I, which had been adapted from an adult-model interview instrument. The result was that data collection schedules needed to be adjusted, but with limited flexibility. One recommendation for future studies in this type of environment would be to allow a longer "shake-down" period on the front-end. Another recommendation would be to provide more flexibility at the back-end should schedules need to be revised for legitimate evaluation purposes.

APPENDIX A

OVERVIEW OF THE JOB CORPS DRUG TREATMENT ENRICHMENT PROJECT (DTEP) EVALUATION DESIGN

APPENDIX A . OVERVIEW OF THE JOB CORPS DRUG TREATMENT ENRICHMENT PROJECT (DTEP) EVALUATION DESIGN'

This appendix provides a context in which to review the findings and conclusions from the Final Report. It focuses on the key elements of the evaluation of the Job Corps demonstration project-Drug Treatment Enrichment Project (DTEP)—and specifically addresses the nature of the program and the objectives of this evaluation. It also covers experimental site selection procedures and characteristics of the matched experimental and control sites and provides a summary of the overall research design and assessment plan. It closes with a description of the follow-up component methodology.

1. PROGRAM EVALUATION OBJECTIVES

Job Corps has long recognized value in early detection of substance use and in offering on-center intervention services to youthful abusers. It has fostered several programs to deal with issues of substance use/misuse, including Alcohol and Other Drugs of Abuse (AODA), which is implemented within all Job Corps centers. CSAT, as the coordinating agency for new federally funded drug program initiatives, is collaborating with Job Corps to strengthen its efforts in the area of drug treatment through (1) the expansion of counseling services, educational tutoring, and recreational activities targeted at substance users; and (2) the inclusion, on center, of dedicated personnel trained to deliver these services.

These enhanced DTEP services have been launched in selected Job Corps centers as a demonstration program subject to close monitoring and careful evaluation. The assessment of this demonstration initiative is designed to:

- Identify the immediate impacts on students, both those directly receiving services and others in Job Corps
- Track the longer-term, enduring changes in students after they leave the Job Corps program
- Identify DTEP factors that are affecting student outcomes
- Measure the costs of providing DTEP services on center

Note: This appendix is drawn partially **from** Appendix A: Evaluation of Job Corps Drug Treatment Demonstration Third Annual Report. Caliber Associates, December, 1994.

- Determine if the benefits (monetary and non-monetary) received from the program equal or exceed the program costs
- Identify the factors associated with efficient and successful DTEP implementation.

To identify the immediate impact of DTEP services on Job Corps students, this evaluation examines students' self-reported changes in substance usage, employment, criminal involvement, and living arrangements along with objective measures of academic/vocational performance and substance use while students are still on center. Follow-up data measuring standard Job Corps outcomes (such as GED attainment, employment placement, and earnings) coupled with indicators of substance abuse and criminal behaviors were gathered one year **after** Job Corps termination to determine the longer-term impact of DTEP participation. Detailed record keeping of service delivery activities (such as number of group counseling sessions) allows analysis of the pivotal program features contributing to its effectiveness, while review of DTEP budget/expenditure data permits calculations of cost and cost/benefits. Finally, in-depth interviews with center staff, DTEP personnel, and focus groups with students conducted annually for the first two years of the demonstration identified factors associated with efficient and successful implementation of the DTEP demonstration in the experimental sites.

In order to reach conclusions about the effectiveness of the DTEP demonstration in meeting its goals, a quasi-experimental design has been employed. Job Corps sites where DTEP was operational are being compared with centers where the non-enhanced services (i.e., AODA-only) were offered. The demonstration centers are the experimental sites; the latter are the comparison sites. A scientifically sound set of procedures was employed to select the sample of Job Corps sites for this study; half of the sample centers were designated experimental locations and the other half identified as control sites. The process and criteria for site selection and the outcome of the matching operation are discussed in the next section.

2. SITE SELECTION AND MATCHING OF EXPERIMENTAL AND COMPARISON CENTERS

Because of real-world constraints, a totally **random** assignment of Job Corps center students to the experimental or control treatment condition was not possible. Sophisticated selection procedures were employed, however, to yield an unbiased selection of matched center pairs. From these pairs, four sets of centers were identified for inclusion in the demonstration

project. One center from each pair was picked at random to house DTEP and the other continued as the AODA-only comparison center.²

The first step in the site selection process was establishment of the sample frame from which to select pairs of centers. Four criteria and several constraints were used. Each center had to fit the following criterion specifications:

- Be a residential program site
- Be located in the continental United States
- Be operated by a private contractor
- Serve between 250 and 650 students.

In addition, several constraints were placed on the pairs of centers. Paired centers had to be approximately similar in terms of the following center and student characteristics:

- Percent of students with positive drug tests (where data were available)
- Percent of African American students
- Percent of students from major urban centers (greater than 250,000)
- · Percent of students with a GED or high school diploma at entry
- Percent of female students
- Center capacity
- Center performance (as measured by the difference between actual and expected length of stay on center by students).

Fifty-one centers met the criteria and constraints for inclusion in the sample **frame**. Cluster analyses were performed separately on two groups of centers (those with information on

Originally, five center pairs were selected and centers assigned to either the experimental or control group. Diffkulties in getting one of the experimental programs fully functioning within the time frame forced a decision either to slow down the demonstration implementation at all program locations or to eliminate the DTEP site. It was decided to eliminate the DTEP site and its companion control center. The impact of this is the loss of some geographic representation across eligible centers and greater concentration of student dam points in fewer programs.

student substance use and those without) to connect pairs of centers together based on their characteristics. --From these analyses, the five sets of centers that were the best matches across ail measures were identified for the demonstration project.

Among the matched pairs, experimental and control designation of centers was then determined on a random coin-flip basis. Random assignment was performed to enhance the overall comparability and freedom from bias of the two groups of centers. The identity and characteristics of the final four sets of centers used in the demonstration analysis are shown in Exhibit 1.³

As shown, the remaining four pairs of centers are generally well-matched with each other on most characteristics. Each'pair is closely matched in terms of racial composition, educational attainment, and prior drug use (where the data are reported). They are similar with regard to sex composition and percent of students coming from large urban areas. These similarities between center pairs indicate that the internal validity (i.e., the extent to which the differences in outcomes can be attributed to DTEP location) of the design is quite high in terms of the factors used for matching.

In terms of external validity (i.e., the generalizability of the findings to a broader group of centers), the final set of eight centers present regional diversity and are similar in their proportions of African Americans and females to the 5 1 centers from which they were selected. However, the centers used in the demonstration evaluation have students who, as a group, have lower levels of education and are more likely to come from large urban centers than their counterparts in the larger sample frame. This same pattern holds when the students in the experimental and control sites are compared with their peers across all 107 Job Corps centers. Thus, the characteristics used to select the centers included in the demonstration evaluation appear to be a reasonably close approximation of the characteristics in the frame from which they were drawn and designed to represent.

3. OVERALL RESEARCH DESIGN AND PLAN

To meet the evaluation objectives, the proposed overall research approach incorporates a quasi-experimental design with both quantitative and qualitative data sources for student outcome and program operations performance measures, To address issues of student outcomes, multi-wave data gathering captures self-report (e.g., questionnaire) and test (e.g., urinalysis, GED

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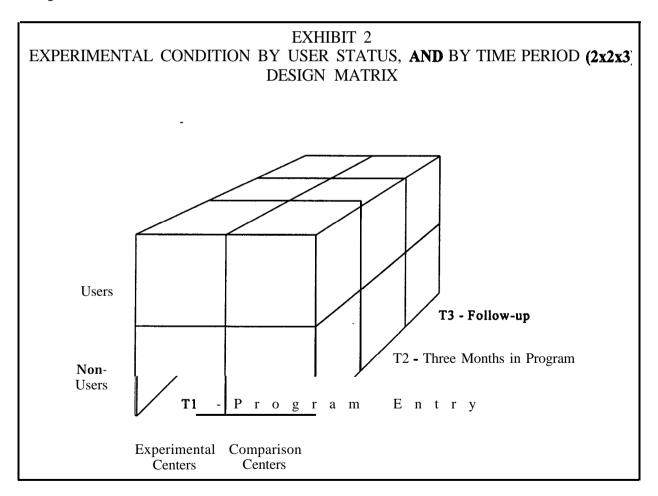
The Grand Rapids-Dayton center pair was removed **from** the data set after the five **pairs** had been selected but before the Program Operations Assessment was undertaken.

EXHIBIT 1 CHARACTERISTICS OF MATCHED PAIRS OF CENTERS'

Center Name	Region	Treatment	% Tested Positive for Drugs	% Black	% from Large Urban Area	% with GED at Entry	% Female	Center Size	Center Perform.
Delaware Valley, NY	2	treatment	28.9	74.9	76.4	5.6	38.7	325	20.2
Oneonta, NY	2	comparison	26.1	73.5	71.1	5.4	29.4	346	-8.1
Potomac, DC	3	treatment	11.5	89.7	50.5	13.1	37.5	475	-18.6
Woodstock, MD	3	comparis	on 17.9	92.6	62.4	6.1	26.3	530	3.3
Gainesville, FL	4	treatment		62.0	27.1	12.4	35.5	350	-12.2
Knoxville, TN	4	comparison		60.6	25.0	11.9	37.2	258	-10.5
San Diego, CA	9	treatment		24.2	43.5	21.6	39.0	600	21.2
Sacramento, CA	9	comparison		30.2	49.2	21.7	44.9	400	10.7
Students in 8 centers			••	62.5	51.2	12.8	35.9		-9.7
Students in 5 1 eligible centers				59.0	43.5	17.6	40.2		0.0
Students in all centers			**	53.8	37.5	17.5	33.1		0.0

exam scores) data from selected students in the experimental and control centers. To assess the program operations component of the evaluation, a combination of ongoing record-keeping activities (e.g., monthly units of service delivered reports) and periodic on-site interviews with DTEP and other Job Corps center program personnel were conducted. Elements of the research design are elaborated below.

Over the course of an 18-month demonstration period, student performance was tracked at three points in time: T_1 --intake into the Job Corps program, T_2 --3 months into training (or termination if prior to three months) and T_3 --12 months after termination from the Job Corps program. Two levels of the demonstration variable, experimental DTEP and comparison AODA-only sites, were coupled with two levels of the student need variable, those who are deemed substance users/abusers and those who were not. A table of cell sizes describing this design is shown below.



Sample sizes in the cells of this design intentionally vary across time in order to net -a sufficient number of substance-using students for meaningful analysis and comparison at T_3 -- 12 months after termination from Job Corps. These figures are based on best estimates of the size of the user/abuser populations on center, survey attrition rates and other factors. Several important design considerations drive these cell size determinations:

- A census of newly entering students across all centers was included for data
 analysis at T₁ because individual user/nonuser status was unknown at that time. A
 priori estimates suggest that their numbers were approximately equal across all
 four analytic groups.
- Students' user/nonuser status was determined by **T**₂. This classification is independent of whether or not students were or had been receiving DTEP or AODA-only services on center. For the greatest analytic impact, however, it is desirable that most users will have received some services.
- Data from all students (rather than a subsample of program participants and their counterparts) were tracked at **T**₂ because of the greater flexibility and enhanced analytic power this large database afforded relative to the ease and **cost**effectiveness of the data gathering efforts.

Disproportional subsamples of users/nonusers were to be taken at T,; absolutely and proportionally more users than nonusers were followed up to facilitate meaningful and more refined analyses and conclusions about program impact on student outcomes.

Sound, but complex, procedures were used to subsample students for inclusion in the follow-up database at T,. Sampling procedures matched students in the experimental and control sites. These efforts also accounted for anticipated survey attrition due to the lengthy period between Job Corps termination and the attempts at follow-up interviews.

At all three time periods, student self-reported questionnaire data and urinalysis findings were obtained. Job Corps student record data (e.g., TABE scores, GED test results) were captured and examined for the two periods of student involvement with Job Corps programs. These results were analyzed and comparisons drawn across groups for both descriptive insights and assessment of outcomes. Among the many findings to be reported, key are:

- Substance usage/recovery rates
- · Changes in substance usage patterns (e.g., frequency, drug of choice)
- · TABE performance scores
- GED attainment rates

- Vocational training outcomes
- · Post Job Corps placements
- Post Job Corps labor force participation rates
- · Post Job Corps earnings
- · Criminal activities and contacts with the justice system.

In addition to examining student outcome data, the research design called for the assessment of program operations information. The approach to marshalling and analyzing these data is two-pronged. Ongoing assessment was achieved in the form of monthly recordkeeping by the experimental and comparison program staff. This effort was complemented by two annual on-site data collection visits from the assessment team. The general purpose of the initial. on-site visit was to gain a thorough understanding of the program activities in order to perform a thoughtful process assessment. The specific objectives of this first visit were to:

- Identify all demonstration program elements at the participating Job Corps centers
- Gather information on the initial implementation process and variations on the intended plan of operation
- Collect early data on the project staff, facilities, recording-keeping practices,
 perceptions of DTEP by center staff and students and to gather preliminary
 program costs
- Obtain first hand experience with program-related activities at all centers.

The assessment plan also included a second round of on-site evaluation team visits to all the centers to chart program changes and to gather detailed program operations data. Particular emphasis was placed on identification of factors and conditions which may contribute to site-specific variations in student outcome measures, should they occur. Specific objectives of these site inspection visits were to:

- Identify any unresolved implementation problems and the reasons for these problems
- Determine the extent to which program delivery service components had changed and the impetus for hese changes (included here are both facilities and program adjustments or modifications)
- Explore any staff changes and the reasons for such changes
- Assess organizational and administrative issues both within DTEP and between that program and other Job Corps center activities

- Audit the ongoing record-keeping systems, with particular regard for maintenance problems and issues of adequacy, accuracy and consistency
- Gather detailed program operations cost data from experimental DTEP centers,

The initial data gathering visits were programmed for three months after the official start date of DTEP operations with follow-up visits slated to occur 12 months thereafter.⁴ The second round of program operation assessment visits occurred one year after the first round of site visits. Details of the program operations site visits are the subject of the next section.

4. PROGRAM OPERATIONS ASSESSMENT VISITS

The major assessment activity for the first and second year of DTEP operation was the onsite evaluation team visits to the eight experimental and control centers. During these visits,
information needed to address the previously stated objectives was obtained. Teams of trained,
experienced evaluators spent four days at DTEP sites and three days at AODA-only centers
observing program operations and facilities, conducting in-depth interviews and collecting record
information. Interviews were completed with all members of the DTEP staff, selected other Job
Corps center personnel as well as students who were involved with the center's substance abuse
program and those who were not. Each visit was kicked-off by a briefing of the Center Director
and closed with either combined or separate out-briefs of the Center Director and the DTEP
staffs.

Three forms of interviewing were used-in-depth one-on-one individual center staff interviews, focus group interviews and direct review of procedures and facilities. Topic Guides rather than structured questionnaires were used to afford program staff greater freedom of expression and to give evaluators latitude to probe critical issues as they emerged. To facilitate candor, all participants were assured of confidentiality and anonymity. No tape recordings of sessions were made, although as an aid to accurate recording of information, key interviews were conducted by pairs of evaluators with one member serving as scribe. The length of each session varied according to the position of the respondent, length of service in that position and on center, and the nature of **the** information being collected. No interview was less than 20 minutes and some extended more than three hours and were spread across several days. An overview of each of these three forms of data collection is described in the following paragraphs.

⁴ Because of delays in implementation of the full DTEP program and record-keeping activities, the official start date for all programs was slipped **from** mid-March to June 15, 1992. As will be discussed later, some centers were still not fully functioning by the date of the first round of site visits.

In-depth Individual Center Staff Interviews-These interviews were conducted individually with each member of the DTEP staff—the Activities Specialist, Substance Specialist, Education Specialist, Assessment Specialist and Program Assistant. Other center personnel whose role interacted with or supported the substance abuse program were also queried. At all centers these included the Center Director, the Health Services Manager, the AODA Specialist, the Center Standards Officer (CSO), the, Manager of Educational Services, the Manager of Vocational Training and the Group Life or Residential Living Manager or their designees. Since not all Job Corps centers are organized and staffed in the same manner, additional interviews with other center personnel were tailored to the requirement of specific sites. The types of additional interviews taken include those with: the Orientation Specialist, the Deputy Center Director, the Manager of Counseling, the Manager of Security, the Director of Administration and the Manager of Recreation. The number of in-depth interviews completed with each of these positions is shown in Exhibit 3.

The goal of the DTEP personnel interviews was to gain insight into all aspects of the program's functioning on center. The specific areas addressed were:

- Individual background information—tenure in the position and in Job Corps, educational level and relevant experience, assessment of DTEP training efforts for position
- Project functions and **responsibilities**—role, the nature of and time spent on specific activities, reporting responsibilities and record-keeping activities.
- Program components-description of **all** program components, overall quality, nature of student interactions, integration of **DTEP/individual's** role with total Job Corps operation
- Implementation process--individual's involvement with and access to program planning, initial implementation, ongoing operations, perceived problem areas and proposed solutions.

The focus of interviews with other staff members was:

- Staff perceptions of the **DTEP** or AODA-only program and its impact on center o p e r a t i o n s
- Demonstration program implementation (in four DTEP sites only)-- involvement in implementation,' satisfaction with current interactions, perceived problems in implementation/operations and recommended solutions

EXHIBIT 3 NUMBER OF EVALUATION TEAM INTERVIEWS ON CENTER BY STAFF POSITION

Job Corps Center Staff	First Year Program Operations Assessment Number of Interviews	Second Year Program Operations Assessment Number of Interviews
DTEP Staff		
Activities Specialist	4	4
Substance Specialist	4	4
AODA Specialist	8	10
Education Specialist	4	4
Assessment Specialist	8	10*
Program Assistant	4	1
1108.4	·	•
Total	24	55
Other Center Staff	_	_
Center Director	8	8
Director of Administration	5	8
Health Services Manager	8	8
Education Center	7	5
Vocational Training Manager	7	4
Residential Living Manager	7	4
Manager of Counseling	5	5
Recreation Manager	8	5
Center Standards Officer	5	8
Manager of Security	8	7
Orientation Specialist	8	4
Occupation Exploration Program Specialist	4	3
Other Staff	3	0
Total	92	79
GRAND TOTAL	116	110

^{*} These positions were increased from year one to year two to accommodate the increased work load.

Assessment of students-awareness of DTEP, impact on students in program and center-wide in terms of **substance** usage, other behaviors and attitudes.

<u>Focus Group Interviews</u>—Student insights about a center's substance abuse program, in terms of its impact on center life and its value to them personally, was gleaned through **non**-directive interviews with small numbers of students. Group sessions, rather than one-on-one interviews, were conducted. This approach offered **greater** opportunity for dynamic interplay

among the youthful respondents and helped. create a non-confrontational atmosphere in which to speak openly.

During each round of site visits four sets of focus groups were held at each center: two with males (all program participants or all non-participants) and two with females (all participants or all non-participants). The types of issues explored from the students' perspective were:

- Perception of the center's attitudes and students' own attitudes toward drug/alcohol use, abuse and treatment programs
- Awareness and understanding of the center's substance abuse program objectives and services
- Level and nature of program participation to date (DTEP/AODA participants)
- Satisfaction with and perceived value of program experiences, program staff and facilities (DTEP/AODA participants).

<u>Procedures and Facilities Review</u>-Direct observation of the program's functioning within the center operations was made by the evaluation team. Particular note was made of:

- Substance abuse facilities, in terms of **office** space and location, privacy and comfort/attractiveness, availability of equipment and supplies
- Audit of program records-check of all record-keeping activities associated with program components, with an emphasis on accuracy of input, timeliness of data collection and recording, file security and confidentiality procedures and execution.

Completed interview and observation information was distilled into narrative summary spreadsheets. These qualitatively rich results were aggregated and provided the basis of the findings reported in Chapters IV, V, and VII of the first and second annual reports.

5. DATA SOURCES FOR THE FINAL REPORT

As previously described, Caliber conducted program operations assessments at each site annually for the first two years of the demonstration. Process, or qualitative, data collected during these site visits provided findings for the first and second annual reports in conjunction with data collected during **intake** and within treatment by the Job Corps center Assessment

Specialists. Additionally, data from the program activity reports, and data on student outcomes from SPAMIS were used to provide a comprehensive evaluation of the DTEP impact on center operations and student behaviors. Because there were no site visits planned for the third year of the demonstration, the third annual report relied on four sources of data:

- Individual Assessment Profile (IAP) data collected at intake, in-treatment and at follow-up
- The National Office of Job Corps Student Pay and Allowance Management Information System (SPAMIS) which houses data on all Job Corps students' reading and math scores as well as termination rates
- Program data consisting of Program Activity Reports (PAR) completed monthly by all centers and Record of Interventions completed by specialists
- Center census and qualitative review of program status documentation.

Individual Assessment Profile Data

Data collected at three points in time (intake, three months within-treatment and one year after the student has terminated **from** Job **Corps**) provided **information on** student demographics and student self-reported behaviors. Data analysis using various statistical techniques determined risk factors related to substance abuse, and correlations between variables as well as tests of significance to identify program impacts and outcomes.

SPAMIS

Data were accessed from the Job Corps National database. Standardized test scores were analyzed to determine reading and math gains for students in the study (e.g., such as GED attainment, educational pre- and post-test scores). Termination rates were calculated to identify differences between DTEP and AODA students.

Service Data

The service data used in the analysis corresponds to all Job Corps students who enrolled on or after February 15, 1993 and, received services. A student was classified as receiving services as long as the student received a biochemical test, individual counseling, or group counseling. Counseling sessions and biochemical test information was gathered **from** the Student Data Form and the experimental center Contact Logs. Any counseling service data which did not include a session time and any biochemical test which did not include test results was not

included in the data for analysis. Under these criteria a total of 36,794 records were available for analysis. These service records applied to 2,130 students. All analysis has been corrected for unknowns and the averages used in the analysis refer to averages per student.

The students who received services were grouped into three categories: DTEP, AODA, Crossovers. DTEP/AODA refers to all students who were originally assessed as needing services and did receive services. Crossovers refer to students who were originally assessed as not needing services, but did receive services. Of the 2,130 students for which service data was used, there were 900 DTEP, 705 AODA, and 426 Crossovers.

In addition to analyzing the service data as a whole, the experimental center Contact Log service data was reviewed and analyzed. From the Contact Logs it was possible to analyze the breakdown of counseling types received by DTEP students. The contact log data consisted of 14,858 records which applied to 727 students.

As a subsample, the service data for all students selected for the follow-up was also analyzed. A comparison was made between service data for respondents and non-respondents. The follow-up service data consisted of 16,091 records (10,768 respondents, 5,328 nonrespondents). These records applied to 1,058 students (739 respondents, 3 19 non-respondents).

6. OVERVIEW OF THE FOLLOW-UP METHODOLOGY

The follow-up sample is based on the **6,5** 10 enrollments from March 1993 through July 1994. The follow-up data collection activities were completed February 1996. The follow-up sample included approximately 1,300 students who have terminated from the program. The sample included all students assigned to DTEP and AODA, plus a sample of students who did not receive services. The follow-up sample yielded 1,156 completed interviews, the allocation included 466 DTEP and AODA students and 224 students who were not originally assigned to receive substance abuse interventions.

6.1 **Sample Selection**

Methods for sample selection involved a comparison design based on type of service provided (DTEP, AODA or no services); program assignment (DTEP, AODA or none) determined student groups. With this general evaluation design, the outcomes of one group of students can be compared with the outcomes 'of **another_group** of students to measure the impact of the DTEP services. Provided the pairs of Job Corps centers and students are well-matched,

and assuming adequate sample sizes, such comparisons will yield unbiased and statistically precise estimates of the impacts of the demonstration.

The goal of the matching process was to create subsamples that were as similar as possible on all relevant characteristics. Five key issues were considered when developing matched groups of students: (1) required sample size given expected response rates; (2) specification of the pool of students from which matched samples must be drawn; (3) specification of the matching methodology; (4) matching of drug users in the experimental and control sites; and (5) matching the students who did not receive services. Program and non-program samples are matched on drug use, age, sex, race, criminality, entry level education, area of residence and entry cohort (cohorts are drawn at three-month intervals).

6.2 **Data Collection**

A total of 13 Field Interviewers (FIs) managed by Research Triangle Institute (RTI) were responsible for conducting the follow-up interviews. Each FI was responsible for interviewing students who are living in the FI's assigned location. Each FI followed standard operating procedures for contacting a sample member. Caliber provided data on the student to RTI to facilitate the FIs ability to locate students. While the sample member is a student at Job Corps, data are collected by the Assessment Specialist on the student's home address, next of kin and his/her address and telephone number as well as any job placement information. Caliber verifies these data with data obtained on individual students through the national Job Corps database, SPAMIS. Location data and telephone numbers were processed by Caliber and are forwarded to RTI who then distributed information to the FIs. FIs began to locate sample members months in advance of the actual interview. The procedures implemented to contact the sample members and to conduct the interview are described below.

During the pre-interview contact stage, each sample member receives a letter with a prepaid postcard. The letter asked the student to return the card, either confirming or updating the address in the files and reminded students that the FI would contact them within the next few months to conduct the follow-up interview.

For those students who do not return the postcard, **FIs** attempted to telephone students directly. The telephone contacts were made by RTI project staff and involved contacting sample **members'** relatives and using telephone directories. To the extent that resources allowed, **FIs** conferred with the Job Corps center regarding their efforts to complete the six-month discharge interview with the sample member.

Before field work (interviewing) began on a case, the FI mailed a lead letter to the sample member's mostupdated address to notify the individual of the follow-up interview. The letter requested that the sample member telephone the FI to set up a convenient appointment time for the interview. If this involved a toll call, the letter instructed the sample member to call collect.

If the FI did not receive a response within one week of mailing the lead letter, the FI began to work on the case by calling the sample member's telephone number in order to establish contact. On the average, it took FIs approximately 10 hours to complete a case (activities include tracking, travel, interview and survey edit).

Prior to the administration of the data collection instrument, the FI obtained the consent to participate in the evaluation from the respondent by reading them the Informed Consent Form. This informs the student of every aspect of the study. Once the student heard the information in the Consent Form, the FIs signed and dated the bottom of the form and gave a copy to the student for reference. The Consent Form supplied the names and telephone numbers (toll free) of individuals to contact for answers regarding the survey data and the respondents' rights and protection. For underage sample members, Informed Consents were obtained **from** the parent or legal guardian prior to approaching the respondent. Additionally, incarcerated sample members had an unique Informed Consent Form.

During the follow-up interview, the FI administered the Individual Assessment Profile - Follow-up (IAP-F) to the student. The IAP-F is modeled after the Individual Assessment Profile - Intake (IAP-I) and the Individual Assessment Profile - within Treatment (IAP-T). Like its counterparts, the IAP-F captures data on the student's physical health, living situation over the past 12 months, criminal involvement, use of substances and treatment history. Unlike the IAP-I and IAP-T, however, the IAP-F obtains a detailed employment history from the student. As with the administration of the IAP-I and IAP-T, the Brief Symptom Inventory (BSI) is administered to the student to collect data on the student's mental health. The interview normally lasts one hour.

A subsample (20%) of the students included in the follow-up survey were also asked to provide a urine sample for drug testing, which was used to validate information about current drug use. Urine was tested for the presence of THC (marijuana), cocaine, amphetamines, and opiates. **FIs** followed standard procedures for collecting the sample from the student as well as packaging and transmitting the urine samples to the laboratory for testing. Students selected to provide an urine sample for testing were given \$10.00 as an incentive for their cooperation.

APPENDIX **B**

VALIDITY AND RELIABILITY ISSUES IN THE EVALUATION OF DTEP

APPENDIX B VALIDITY AND RELIABILITY ISSUES IN THE EVALUATION OF DTEP

The DTEP evaluation design involves a comparison of the outcomes of students in Job Corps centers that offer DTEP with the outcomes of students in matched Job Corps centers that offer AODA services only. The data used to measure the student characteristics, program experiences and post-program outcomes for the evaluation come from multiple sources, including program administrative records, and responses to baseline and follow-up surveys. The accuracy of the evaluation findings depends on the extent to which the study, as implemented, meets certain general validity and data reliability requirements. The validity requirements primarily concern the extent to which the demonstration and control centers, and the students they serve, are similar to each other and are broadly representative of the Job Corps program nationwide. In addition, the evaluation data sources must provide consistent and reliable information for students served in both the demonstration and control centers. The purpose of this chapter is to present evidence on some of these validity and reliability issues.

The chapter is organized as follows. First, we present information on the characteristics of new students served by the eight Job Corps centers included in the study and compare them to the characteristics of new students served in the over 100 other Job Corps centers nationwide. We then provide evidence on the extent to which new Job Corps students in the demonstration and control centers were given a baseline interview (i.e., IAP-I) and were enrolled in the study, and on the similarity of the students who were enrolled in the study to those who were not. Taken together, these results help us assess whether the centers and students included in the evaluation can be viewed as broadly representative of the Job Corps program nationwide. Additional information on the comparability of the students served by the DTEP and AODA programs in these centers is provided in Chapter IV. The chapter concludes with a brief section concerning the reliability of the data sources used in the evaluation.

1. COMPARISON OF STUDENTS IN STUDY CENTERS VERSUS OTHER CENTERS

As described in detail in our earlier Methodology Report, the **four pairs** of matched Job Corps centers included in the evaluation study were selected to meet certain' objectives and criteria. To enhance the validity of the evaluation, the centers were selected to exhibit sufficient diversity (i.e., geographic location,. size, contractor) to be broadly representative of Job Corps centers nationwide. Moreover, a distance measure was used to ensure that each pair of centers

was reasonably well-matched on a number of student and center characteristics.' At the same time, however, it was recognized that certain atypical centers (e.g., non-residential centers, centers located outside the continental United States, extremely large/small centers) should be excluded.* In addition, based on discussions with the Office of Job Corps, the study was restricted only to centers that were operated by private contractors, and Civilian Conservation Corps (CCC) centers were excluded.

As a result of these exclusions, it is unlikely that the eight centers or the students served by those centers will be truly representative of all Job Corps students nationwide. It is, however, important to understand the nature and magnitude of the differences, and to provide some indication of the broader group of centers to which the results can be generalized. Below we provide initial evidence on this issue based on Job Corps program records maintained in the Student Pay and Allowance Management Information System (SPAMIS).

In Exhibit B-I, we compare the characteristics of new Job Corps students who entered the study centers during the period from April 1, 1993 through March 3 1, 1994 with the characteristics of new students who entered any other Job Corps center during the period. To focus this and other analyses on new students, we exclude students who had an earlier enrollment in Job Corps, as well as students who transferred into the study center from another center during the period. The one-year period of April 1993 through March 1994 was chosen to roughly correspond to the first complete year in which consistent baseline data were obtained on all study students (using Versions 4 and 5 of the IAP-I), and during which DTEP as initially envisioned was fully operational in all demonstration sites.

The following center and student characteristics were taken into account in the matching process: percent of students with a positive drug test (available only within certain centers that participated in an earlier pilot study); percent of **African** American students: percent of students who came from cities of greater than 250,000 population; percent of students with a GED-or high school diploma at entry; percent of female students; center capacity; and difference between actual and expected length of stay of students in the center.

² Centers serving between 250 and 650 students were included as potential study sites.

EXHIBIT B-I COMPARISON OF CHARACTERISTICS OF NEW STUDENTS IN STUDY CENTERS VERSUS OTHER JOB CORPS CENTERS (NEW STUDENTS WHO ENROLLED BETWEEN APRIL 1, 1993-MARCH 31, 1994)

STUDENT CHARACTERISTICS	DTEP	AODA	Oyerall	OTHER CENTERS
Percent Male	63.9%	61.7%	62.9%	59.8%
Percent White	15.6%	22.2%	18.8%	31.6%
Percent African American	[54.9% [61.2%	58.0%	47.6%
Percent Hispanic	23.8%	12.4%	18.2%	14.6%
Percent American Indian or Alaskan Native	1.0%	0.5%	0.8%	3.6%
Percent Asian or Pacific Islander	4 . 8 %	3.7%	4.2%	2.6%
Age (Years)	18.6	18.2	18.4	18.3
Percent Age 16	18.7%	22.8%	20.7%	22.3%
Percent Age 21 or Older	18.5%	14.6%	16.6%	14.5%
Highest Grade Completed (Years)	10.0	10.0	10.0	9.9
Percent Completed Grade 12	22.0%	19.7%	20.9%	21.1%
Initial Reading Level (Grade-Level Equivalents)	7.7	8.1	7.8	8.1
Initial Math Level (Grade-Level Equivalents)	7.3	7.6	7.4	7.5
Percent with Dependents	11.2%	10.9%	11.1%	12.3%
Percent from Family on Public Assistance	41.3	41.2	41.2%	43.4%
Percent from City of Greater than 250,000 Population	57.8%	54.8%	56.6%	36.0%
Percent Ever Employed Previously	24.4%	16.6%	20.6%	26.4%
Average Wage on Prior Job	\$4.79	\$4.92	\$4.84	\$4.87
Percent Need Bilingual Program	5.9%	2.5%	4.3%	3.1%
Percent Residential Status	92.2%	83.6%	88.0%	87.0%
Sample Size	2,754	26,114	5,368	53,640

In the third and fourth columns of Exhibit B- 1, we compare the characteristics of the 5,368 new students in the study centers as a group with the characteristics of the 53,640 new students who enrolled in other Job Corps centers during the period. As this exhibit indicates, the population of students served in the study centers are similar to the students served in other Job Corps centers on a number of dimensions, including gender, age, education, earnings on previous jobs, and the overall percent served in a residential program. On the other hand, the study centers as a group seem to serve a somewhat more disadvantaged population than other centers. In particular, as compared to all other centers, the study centers serve a larger proportion of African Americans (58 percent as compared to 47.6 percent), students with a somewhat lower average reading level (7.8 as compared to 8.1), a greater proportion of students from large urban areas (56.6 percent as compared to 36 percent) and fewer students with previous employment experience (20.6 percent as compared to 26.4 percent).

These differences in student characteristics reflect the center selection criteria described earlier, which resulted in excluding CCC's that disproportionately serve whites and youth from small urban and rural areas. Given these differences, it is reasonable to conclude that, provided other validity and data reliability requirements are met, the results from the study could potentially be generalized to the broader group of centers operated by private contractors, but not strictly to all Job Corps centers. On the other hand, because of these differences and the evidence from prior research indicating a positive relationship between urban residence and probability of substance use, the study centers as a group are likely to have somewhat greater drug and alcohol problems than students in other Job Corps centers. Thus, the set of eight centers selected for the study seem to be an adequately representative group of centers for testing the effectiveness of a drug treatment intervention program.

In the first two columns of Exhibit B-1, we compare the characteristics of the 2,754 new students to the demonstration centers that operated DTEP with the characteristics of the 2,614 new students to the matched study centers that operated the AODA program during the April 1993 to March 1994 period. These data reflect the broader pool of new students at the study centers from which students needing DTEP/AODA services will be identified. These results indicate that the DTEP and AODA centers included in the study are quite similar in terms of gender, age, education level, and in the proportion from large urban areas. This is not surprising as several of these factors were explicitly included in the center matching process. The racial composition of the students in the two groups of centers is also reasonably similar, although DTEP centers serve a disproportionately greater number of Hispanic students than AODA centers (23.8 percent as compared to 12.4 percent). This is consistent with DTEP centers being more likely to serve students in need of a bilingual program (5.9 percent as compared to 2.5

percent). In addition, the DTEP centers in the study serve a greater proportion of students in residential status.

These results indicate that the pool of new students at the demonstration and control centers during the main evaluation period are reasonably similar. However, only a subset of these students are subsequently identified to be in need of drug or alcohol treatment services. Therefore, it is also important to understand the extent to which the selection processes used to identify students in need of program services result in similar students being served by DTEP and AODA in the study centers.

2. STUDY ENROLLMENT COVERAGE IN DTEP AND AODA CENTERS

The information provided above indicates that, for the most part, the general population of new students who enter the DTEP and AODA study centers are reasonably similar to each other and together the new students served can be viewed as broadly representative of students served in Job Corps centers operated by private contractors. According to the design of the evaluation study, as new students entered the study centers, they were to complete the IAP-I interview and be classified according to their need for drug treatment services. As such, an important evaluation issue concerns whether all new students completed an IAP-I interview and were enrolled in the study, or whether a substantial number of new students slipped through the enrollment process without completing an IAP-I. Below we provide evidence on this issue of study enrollment coverage.

As described in Exhibit B-2, of the 5,368 new students who enrolled in the study centers during the one-year period of April 1993 through March 1994, 4,355 completed an IAP-I and were enrolled in the study. This corresponds to an overall study enrollment coverage rate of 8 1.1 percent. Although this coverage rate is reasonably good, it indicates that nearly one in five of all new students (and over 1,000 students overall) to the centers were not included in the study. In order to assess the validity of the evaluation findings, information is needed regarding the extent that there are differences in this rate by demonstration versus control centers or the extent that students who were not included in the study are systematically different from those who were. If such differences are large, the validity of the evaluation findings will be potentially limited.

Information in Exhibit B-2 clearly indicates that the study enrollment coverage rate varies considerably across the eight Job Corps centers. For example, the percent of new students who completed an IAP-I ranges from a low of 59.2 percent for Sacramento Job Corps Center to a high of 93.6 percent for Gainesville Job Corps Center. Moreover, the mean enrollment coverage rate for the DTEP centers as a group is 87.8 percent, which is much greater than the rate for the

matched AODA study centers (74.1 percent). This difference in study coverage between DTEP and AODA centers is most likely due to the fewer demonstration-specific staff that were provided to control centers to support all study activities, and problems with staff turnover at some sites. Nevertheless, this large difference in study coverage between the two types of centers could limit the validity of the evaluation.

EXHIBIT B-2 EXTENT OF STUDY COVERAGE BY CENTER AND OVERALL (NEW STUDENTS WHO ENROLLED BETWEEN APRIL 1, 1993-MARCH 31, 1994)					
CENTER	72/	NUMBER COMPLETED IAP-I	PERCENT COMPLETED IAP-I		
DTEP Centers					
Delaware Valley	557	455	81.7%		
Gainesville	533	499	93.6%		
Potomac	779	704	90.4%		
San Diego	885	759	85.8%		
DTEP Centers Overall	2,754	2,417	87.8%		
AODA Centers					
Oneonta	598	437	73.1%		
Knoxville	606	456	75.2%		
Woodstock	908	748	82.4%		
Sacramento	502	297	59.2%		
AODA Centers Overall	2,614	1,938	74.1%		
<u>Total</u>	5,368	4,355	81.1%		

3. COMPARISON OF STUDENTS WITH IAP-I TO STUDENTS WITHOUT IAP-I

The differences in study coverage rates by DTEP and AODA centers reported above would not pose major threats to the validity of the evaluation if the reasons students did not complete the IAP-I and enroll in the study were (1) primarily random and unrelated to the need for drug treatment services, and (2) primarily unrelated to the potential effectiveness of drug treatment programs. Suppose, for example, that the primary reasons for the lack of coverage were related to staff turnover in the key study data collection position, such that the position was

vacant for a prolonged period. In this instance, the lack of coverage would not likely pose a major threat to the evaluation unless the characteristics of students served varied dramatically by time of the year.' If, however, the lack of overall coverage is primarily due to certain types of students being systematically excluded from the intake process (such as short time stayers in Job Corps), this would pose more serious threats to the validity of the evaluation. Below we provide evidence on this issue.

In Exhibit B-3, we compare the characteristics of the new students who entered the DTEP and AODA centers and received an IAP-I with the characteristics of those new students who entered the same centers during the same period, but did not receive an IAP-I. As this exhibit indicates, there are large differences on several characteristics between students who received an IAP-I and those who did not. 'Moreover, as described below, the patterns of the differences are generally similar in both the DTEP and AODA centers."

There are four consistent patterns of results of particular interest in Exhibit B-3. These concern differences in the characteristics of students who receive an IAP-I and those who do not by (1) race/ethnicity, (2) the need for a bilingual program, (3) reading ability and (4) age.' Moreover, the underlying differences among the first three types of characteristics appear to be interrelated. Specifically; we find for both the DTEP and AODA centers, that new students who receive an IAP-I are much less likely to be in need of a bilingual program, are less likely to be Hispanic or Asian/Pacific Islander (and much more likely to be African American), have higher entry reading levels and are somewhat younger than those who do not receive an IAP-I. Thus, it appears that students for whom English was not a primary language and who therefore required a bilingual program and scored low on the entry reading test, were more likely to be excluded from the intake process at both DTEP and AODA centers. In other analyses, we compared the characteristics of new students who received an IAP-I with those who did not after excluding all

The lack of coverage could indirectly **cause** an evaluation problem, if as fewer new students were enrolled in the study, previous enrollees received much more services than they would normally.

One factor that is not consistent between DTEP and AODA centers concerns the IAP-I completion rate by residential status. Specifically, as Exhibit B-3 indicates, in DTEP centers, residential students are equally likely to be represented in the IAP-I or non IAP-I group, whereas for AODA centers 87 percent of those with an IAP-I are residential students as compared to only 73.5 percent of those without an IAP-I.

In other analyses, we also compared the duration of length of stay in Job Corps for students who received an IAP-I and those who did not. This analysis indicated that those who did not receive an IAP-I were at much greater risk of leaving Job Corps early, and had a much lower median length of stay(77.9 days), as compared to those who received an IAP-I (155.9 days). At **the same** time, however, very few students without an IAP-I left the center before they would normally have received their IAP-I. Thus, it appears that the study did not include in the evaluation a substantial number of youth who were at high risk of dropping out of the program early and who may have had alcohol or drug problems.

students who were reported as needing a bilingual program. The large differences in characteristics apparent in Exhibit B-3 are much reduced after restricting the sample to those not in need of a bilingual program, although differences by age, reading ability and race/ethnicity are still present to some extent.

Although not reported in Exhibit B-3, we also examined the patterns of the timing of enrollment into Job Corps for students who received an IAP-I versus those who did not. Our analysis indicated that, within DTEP and AODA centers, the numbers of students who did not receive an IAP-I were not concentrated in specific months, but were rather spread out over the entire enrollment period. Thus, it does not appear as if staff turnover problems were the primary cause of students not receiving an IAP-I interview, but rather that students in need of a bilingual program (and possibly other disadvantaged students at risk of leaving Job Corps early) were systematically excluded in both DTEP and AODA centers. As a result, the study findings should be broadly interpreted as the effects of DTEP relative to AODA in Job Corps centers operated by private contractors and for new students not in need of a bilingual program.

4. DATA RELIABILITY ISSUES

A final issue that affects our interpretation of the study findings concerns the reliability of the data used in the evaluation. Of particular importance, the data sources used in the evaluation must provide highly reliable information for students in both the demonstration and control centers. In this report, we primarily draw on information from four data sources: (1) IAP-I, (2) IAP-T, (3) IAP-F, and (4) the Job Corps SPAMIS database. Of the four primary data sources, only the IAP-I and SPAMIS data are available for all students who were enrolled in the study; the IAP-T is only available for a subset of relatively long-term stayers, and to date we have post program follow-up data from the IAP-F for early leaving students. In addition, the report includes limited information based on the counseling records and biochemical testing records maintained at the centers, which was a weak link in the recordkeeping process at the centers. Information on services was affected by staff turnover at the DTEP centers and by limited availability of the information at the control centers. Below we briefly provide information on the reliability of the two primary data sources that are available for all students in the evaluation.

EXHIBIT B-3
COMPARISON OF CHARACTERISTICS OF NEW STUDENTS IN STUDY CENTERS WITH AND WITHOUT AN IAP-I (NEW STUDENTS WHO ENROLLED BETWEEN APRIL 1, 1993-MARCH 31, 1994)

	. D	OTEP Centers	AC	DDA Centers
Student Characteristics	IAP-I	No IAP-I	IAP-I	No IAP-I
Percent Male	63.6%	66.5%	63.9%	55.5%
Percent White	16.3%	10.4%	21.1%	25.3%
Percent African American	57.0%	40.4%	65.8%	47.9%
Percent Hispanic	22.4%	33.2%	11.8%	14.2%
Percent American Indian or Alaskan Native	0.9%	1.5%	0.4%	0.9%
Percent Asian or Pacific Islander	3.4%	14.5%	0.9%	11.7%
Age (Years)	18.5	19.1	18.1	18.5
Percent Age 16	19.5%	13.1%	24.5%	18.0%
Percent Age 2 1 or Older	17.6%	24.3%	13.0%	19.0%
Highest Grade Completed (Years)	10.0	9.9	9.9	10.1
Percent Completed Grade 12	2 1.9%	22.3%	18.8%	22.4%
Initial Reading Level (Grade-Level Equivalents)	7.9	5.7	8.3	7.2
Initial Math Level (Grade-Level Equivalents)	7.3	6.6	7.6	7.6
Percent with Dependents	11.3%	10.7%	10.1%	13.3%
Percent from Family on Public Assistance	41.2	41.8	40.1%	44.3%
Percent from City of Greater than 250,000 Population	56.3%	68.5%	54.1%	56.5%
Percent Ever Employed Previously	24.5%	23.1%	15.1%	20.7%
Average Wage on Prior Job	\$4.8 1	\$4.62	\$4.91	\$4.92
Percent Need Bilingual Program	3.3%	24.7%	0.4%	8.6%
Percent Residential Status	9 2 .	0 93.2	87.0	73.5
Sample Size	2,417	337	1,938	676

4.1 Reliability of IAP-I Data

In Exhibit B-4, we present information concerning the reliability of data obtained from the IAP-I. Specifically, we present interviewer ratings of their confidence in the validity of students' responses to the IAP-I in general and to particular sections in the IAP-I related to drug use and criminal activity. For this analysis, we included all students who completed either Version 4 or 5 of the IAP-I, and were included in the study.

As shown in the "all students" column of Exhibit B-4, interviewers have quite high assessments of the reliability of the IAP-I data overall. Specifically, interviewers indicated that they suspected only 12.4 percent of all students of misrepresenting or misunderstanding any section of the survey. Furthermore, interviewers indicated that they suspected that only 9.1 percent of all students misrepresented their prior drug use in the survey and only 7.1 percent misrepresented their prior criminal activity. Overall, this suggests that the reliability of the IAP-I data are reasonably high.

However, there are important differences in data reliability by demonstration/control center and among students in those centers assigned to receive drug or alcohol treatment services. In particular, we find **that the** reported level of suspicion of misrepresentation/misunderstanding is much higher in DTEP centers than in control centers. For example, whereas interviewers identified 12.4 percent of all students as likely misunderstanding or misrepresenting some section of the IAP-I, the rate was 18.1 percent for demonstration centers and 5.0 percent for control centers. A similar pattern holds for the other two interviewer assessment items by center type.

The large differences by center type translate into even larger differences among the subset of students initially assigned to receive drug or alcohol treatment services in the two centers. This large difference arises because the proportion of students suspected of data validity problems assigned to AODA services is only slightly larger than the proportion of all students in the center suspected of data validity problems, whereas the proportion of students suspected of data validity problems who were assigned to DTEP services is much greater than the proportion of all students in the DTEP centers suspected of data validity problems. For example, although 18.1 percent of all students in the demonstration centers who completed an IAP-I were suspected of data validity problems as compared to only 5 percent of students in the control centers, 27.1 percent of students assigned to DTEP were suspected of data validity problems as compared to only 7.2 percent of students assigned to AODA. This pattern of quite large differences in potential data validity problems between students assigned to DTEP versus AODA also holds for the other two interviewer assessment items in Exhibit B-4.

EXHIBIT B-4
INTERVIEWER RATINGS OF LEVEL OF CONFIDENCE IN THE VALIDITY OF THE STUDENTS' RESPONSES.

	Job Corps Cen	ter Type	Signi-	0	reatment n Type		Signi- ficance	Signi- ficance		
Interviewer assessment	Experimental	Control	ficance Level*	DTEP	AODA	Non- Program	Level D*A ¹	Level D*A*P²	Ail Students	N
Percentage of students who were suspected of misrepresenting or misunderstanding any section	18.1	5.0	.00	27.1	7.2	9.8	.00	.00	12.4	5694
Percentage of students who were suspected of misrepresenting or misunderstanding Section D - Drug use	14.2	2.6	.00	23.5	4.2	6.6	.00	.00	9.1	5486
Percentage of students who were suspected of misrepresenting or misunderstanding Section F - Criminal activity	10.4	3.1	. 0 0	16.8	4.8	5.3	.00	.00	7.1	5368
N	3332	2714		1027	1001	4018			6046	

^{*} Note: Significance level of Chi-square statistics

 $^{^{\}rm I}$ Significance level of differences between ${\rm DTEP}$ and ${\rm AODA}$ students.

 $^{^{2}\,\}mbox{Significance}$ level of differences between $\mbox{DTEP},\mbox{ AODA}$ and non-program students.

How are we to interpret this evidence that suggests reasonably high levels of data reliability overall, but large differences between demonstration and control centers and in the students assigned to receive DTEP or AODA services? First, it seems appropriate to conclude that the validity of the IAP-I data overall is reasonably high. Second, although the differences could simply reflect underlying differences in the levels of suspicion of the interviewers in the two groups of centers, or accurately reflect a much higher propensity to misrepresent/ misunderstand IAP-I items by students in demonstration centers, we suspect an alternative explanation.

Specifically, we believe that the higher levels of reported concerns about the validity of the IAP-I data in DTEP centers than AODA centers more likely reflects the fact that the reported information is being directly used in DTEP centers to identify students to target for drug or alcohol treatment services, whereas that determination in control centers is made almost entirely based on the results of biochemical tests. As a result, intake interviewers in DTEP centers are more focused on the accuracy of the data in the IAP-I than intake interviewers in AODA centers, which results in a greater reported level of concern about data validity. Thus, our overall assessment is that the IAP-I data appear to be quite reliable, and the reported differences between demonstration and control centers in data reliability may be greatly overstating the true differences.

4.2 Reliability of SPAMIS Data

The other primary data source that is available for all students in the evaluation are Job Corps program records maintained in the SPAMIS data base. These data include background characteristics of students obtained by screeners during the recruitment process, information about program experiences while in Job Corps, and information about the initial post-program outcomes achieved by the student as recorded by the placement agency. Because there is no truly independent assessment of the validity of the SPAMIS data, below we briefly describe our perceptions regarding this issue based on our experiences in analyzing these data.

For the most part, we believe the SPAMIS data are of very high reliability. This is in part because of the in-depth procedures manuals that have been developed over the history of this 30-year program to describe how agencies are to collect and record application and placement information. Moreover, all centers use the same test (TABE) to assess learning gains and all centers utilize the Training Achievement Records to determine vocational completion levels. Thus, the validity of the data on program services received should be reasonably high.

Although we believe that the validity of the SPAMIS data is quite high, potential concerns include: (1) some screening and placement agencies develop their own forms for collecting the data for input into SPAMIS, and in some instances the specific questions on the form or the way the question is asked differ from the true item being collected; and (2) the very high turnover rates of data clerks in Job Corps centers who are responsible for maintaining records on center and for data entry of the information into SPAMIS, may result in less consistency in the quality of information across centers. Overall, however, we believe the key items related to program experiences and post program outcomes are of high quality.

APPENDIX C GENERAL ANALYSIS STRATEGY FOR THE EVALUATION OF DTEP

APPENDIX C GENERAL ANALYSIS STRATEGY FOR THE EVALUATION OF DTEP

To estimate the overall effect of DTEP requires models which account for the quasi-experimental nature of the research design. To do this, the regression-like models (either logistic regression or multiple regression models) are used in order to control for possible initial differences between enrollees in DTEP and enrollees in the AODA program. Although experiment sites and control sites are matched, no random assignment of youth to either DTEP or AODA (or to non-program status occurred), hence, it is important to evaluate the drug treatment enhancement program accounting for possible differences among youth assigned to either AODA or DTEPs in the control and experimental settings, respectively.

For this assessment of DTEP, a simple dummy variable representing "in DTEP" versus "in AODA" is used to evaluate the effect of the demonstration project. A statistically significant effect of the "in DTEP" variable will signify significant differences in the given outcome between youth assigned to DTEP and youth assigned to AODA. Importantly the models used in these analyses will assess program effects controlling for relevant control variables that might have explained any crude-mean differences observed between the DTEP and AODA groups. For example, we control for initial level of drug involvement when looking for the effect of DTEP on various outcomes. If youth assigned to DTEP were consistently more involved with drugs at entry, it would be more difficult for the program to show significant reductions in drug use or increases in employment compared to AODA unless this initial difference is controlled. We use statistical controls representing: (1) demographic factors, (2) prior work experience and education, (3) prior substance use, and (4) specific risk factors for the outcome of interest (e.g., mother's past drug use when examining drug use of an individual or past criminal history when assessing criminal acts or local labor market unemployment when assessing wages or employment). (Definitions and descriptive statistics for the control variables are given in Appendix D and variables in each specific model are given in Appendix E with the detailed results for each model).

The general model or approach used in these analyses is as follows:

$$Y = a + b_1 (DTEP) + c_k X_k$$

where Y represents the outcome of interest; X_k the set of independent or control variables included to capture differences in participants characteristics; c_k the effects of each of these control variables; and b, represents the effect of being a DTEP enrollee compared to an AODA enrollee. The direction of effect and statistical significance of b_1 is our prime interest. For

postive outcomes (e.g., abstaining from use) we expect DTEP status to show increases in outcomes compared to AODA. For negative outcomes (e.g., frequency of use), we expect DTEP status to indicate decreases in outcomes compared to AODA (i.e., a reduction in negative outcomes). For multiple regression, the b_1 effect represents the average difference in outcome for a DTEP versus an AODA youth net of other characteristics in the model; its sign (+ or -) will indicate the direction of the effect. For logistic and hazard-rate regressions, the b_1 effect can be used to represent the change in likelihood or odds a given outcome will occur or the rate of occurrence of an outcome. For all outcomes, we use a 1-tail test of significance for the effect of DTEP program; for all other factors statistical significance is based on 2-tailed tests of significance.

1. TYPES OF MODELS

We will use logistic and multinomial regression for outcomes that are **dichtomous** or **polytimous/ordinal** (e.g., presence or absence of use and frequency of marijuana use) and we use multiple regression for **interval/continous** outcomes (e.g., earnings). For the analysis of length of stay, a hazard-rate regression model is used to estimate the impact of the treatment on the rate of departure from Job Corps.

In addition, for the first wage outcome we use selection models in which we jointly estimate the type of placement (i.e. school versus employed versus undetermined) and wage in order to control for differentials among the students in their entry into paid positions. This **two**-stage estimation process, often referred to as a *selection model* uses a multinomial multivariate logistic regression model to estimate the likelihood of an observed job placement, and a linear regression model with selection correction to estimate the effects of center, program and individual characteristics on the wage rates. The results presented here are based on the linear regression model that corrects for the probability of being placed in a job and having this placement observed.

All models follow the same basic logic as given in the above equation. All four, types of models allow a direct assessment of DTEP versus AODA **controling** for relevant factors that may influence (beyond that of program assignment) the outcome of interest, thus minimizing threats to the valid evaluation of the demonstration project.

Each exhibit in Appendix E shows the "unadjusted" effect of DTEP; this effect represents the simple **average difference on the outcome of DTEP** versus AODA (Model 1) **and is** equivalent to a simple t-test of means. The second column in each exhibit represents the "adjusted" effect of DTEP versus AODA accounting for the measured differences among

sampled individuals on the additional, control variables included in the model (Model 2). This represents the effect adjusting for potential initial differences of the AODA or DTEP youth. Given the quasi-experimental design of this evaluation study, the adjusted effect represents a more appropriate estimate of the effect of DTEP program compared to the simple mean difference between DTEP and AODA in Model 1.

2. STANDARDIZED PERCENTAGES

For ease of presentation we provide "standardized" percentages for DTEP and AODA students. These percentages (or other quantities) are derived by taking the final model for a given outcome, and then using the average of characteristics of DTEP students and the coefficients from the model to project the expected or predicted percentage. The effect for AODA versus DTEP is derived by applying the same characteristics and coefficients, but for AODA we remove the **coefficient** for the effect of DTEP. Since the effect of DTEP is represented by a dummy variable (O=AODA, l=DTEP) this amounts to multiplying the **b**₁ coefficient in the general model by zero (being in the AODA category) to obtain the standardized percentage for AODA students as if all other characteristics were the same as observed for DTEP students.

The estimated **coefficients** of the regression models are used to compute the standardized average wage rates for DTEP and AODA students who were known to be placed in a job after termination from Job Corps. The standardized average for the AODA students provide the information as to the estimated average wage rate for the students who participated in the AODA program instead of DTEP but who have identical characteristics (including local labor market characteristics) as the DTEP participants. Similarly regression **coefficients** from the yearly earnings model provide standardized average yearly earnings for DTEP and AODA students as if both groups had the characteristics of entering DTEP students.

3. WEIGHTS

For all analyses we weight the data by non-response patterns of participants in order to maintain the general representation of the selected experimental and control Job Corps sites; we present a brief review of these non-response patterns and the implications for the results of the evaluation in the body of the report.

APPENDIX D

DESCRIPTION OF THE ANALYSIS SAMPLE FOR THE EVALUATION OF DTEP

APPENDIX D DESCRIPTION OF THE ANALYSIS SAMPLE FOR THE EVALUATION OF DTEP

In examining the impact of the DTEP on in-program and post-program and follow-up outcomes, the analyses were restricted to a subset of students who are representative of:

- (1) New students to Job Corps at the time they enrolled in one of the study centers; and,
- (2) Students who completed versions 4 or 5 of the IAP-I interview (which corresponds roughly to enrollees in study centers after March 1993).

The first criterion allows us to make inferences about the impact of DTEP for new enrollees. The enrollment of transfer students and re-enrollees in the study centers is likely to be an outcome of their previous experiences in Job Corps that are not fully known and their characteristics at the time of enrollment into a study center may be dependent upon these prior Job Corps experiences. As such, it is difficult to interpret the experiences of transfer and re-enrollment students as an outcome of their current enrollment.

The second criterion enables us to have consistent measures of baseline characteristics for all sample members. Because the impacts of DTEP are derived from multivariate models that control for differences in student characteristics, it is important that these characteristics be similarly measured for all students in the analysis sample.

A total of 6,510 unique entries of IAP-I versions 4 and 5 were available from all study centers at the time the evaluation study databases were prepared for this report. Of these 6,5 10 students, 6,461 (99.2%) could be matched to SPAMIS (the Job Corps Management Information System) records by the social security number and the exact or phonetic names of the students. Among the 6,46 1 students for whom we could obtain SPAMIS data, 6,05 1 were identified as new Job Corps member students. These 6,05 1 students constitute our analysis sample for the outcomes measures obtained from the SPAMIS records, describing in-program and immediate post-program outcomes. The follow-up sample is a further subset of 1,156 students who were selected for the follow-up and who responded to the follow-up survey.

Characteristics of DTEP, AODA, and Non-Program Students

DTEP, AODA, and non-program students differ with respect to various characteristics at the time of entry into Job Corps, including demographic background, prior education, work history, family background, drug use, and criminal activities. Because the characteristics of students at entry into Job Corps affect their in-program and post-program outcomes, an understanding of the differences in the characteristics of the students entering the demonstration and control centers and the differences in the characteristics of the students who were assigned to receive DTEP and AODA programs is important for evaluating the impact of the enriched drug treatment services. Furthermore, the background characteristics of the students are accounted for while estimating DTEP effects. In this section we describe these differences in background characteristics across the three groups.

Of the 6,051 new students in the analysis sample, 2,035 (33.6%) were assigned to receive drug treatment services. A somewhat lower percentage of students at the demonstration centers were assigned to receive DTEP services (30.8%) than at the control centers (37.1%).

Exhibit D-l describes the characteristics of the students at the time of entry to the study centers based on data reported in the IAP-I. Students in DTEP were slightly older than students in the AODA program. Specifically, among the DTEP students, 16.0 % of students were age 21 or older compared to 12.1% of the AODA students.

The DTEP and AODA programs served students of substantially different racial and ethnic backgrounds. Compared to the AODA program, DTEP served a smaller proportion of African American students (53.8% versus 66.9%), and a larger proportion of hispanic students (23.4% versus 15.0%).

The DTEP and AODA students had similar gender composition, but students in both types of centers who were assigned to the drug treatment programs were more likely to be male. Specifically, three-quarters of students in DTEP and AODA programs were male, as compared to only 57.4% of all non-program students.

Educational background and work history characteristics are also described in Exhibit B-l. DTEP and AODA students have largely similar educational background characteristics. Students in DTEP were slightly more likely to have a high school diploma or GED (13.3% versus 11.7%). However, these percentages are much lower than that for non-program students (24.9%).

Prior work experiences of the DTEP, AODA, and non-program students were largely similar. **50.1%** of all **DTEP** students reported having worked in the previous **12** months, as compared to 54.7% of all AODA students and 53.5% of non-program students.

In Exhibit D-1 several family background characteristics of DTEP, AODA and non-program students are described. These results indicate that the selection processes used to assign students to receive drug treatment services yield groups of DTEP and AODA students who are more disadvantaged in their family backgrounds than non-program students. Furthermore, DTEP students have slightly more disadvantaged family backgrounds than AODA students. For example, students in DTEP were more likely than students in the AODA program to come from a disrupted home environment (48.0%, as compared to 42.7%). About one-fifth of DTEP and AODA students have lived with both parents during childhood as compared to over one-quarter of non-program students.

Exhibit D-1 **also** describes the illicit drug involvement of DTEP, AODA, and **non**-program students. We developed a scale of self-reported drug use to capture differences in drug involvement. The scale involved four categories: (1) never used drugs; (2) prior drug use; (3) current moderate drug use; and (4) current extensive drug use.' DTEP students were somewhat more likely to be current extensive drug users than AODA students (65.1% versus 58.9%) and less likely to be current moderate drug users 22.4% versus 27.8%). Moreover, very few **self**-reported prior users (about 2%) were assigned to receive drug treatment services in demonstration or control centers. About 10% of DTEP and AODA students self-reported that they had never used drugs.

Although non-program students report much lower rates of drug use than program students, a significant number report recent or current use of illicit drugs. For example, 10.8% are classified as current extensive users, and another 15.6% are classified as current moderate users. DTEP students were more likely to have received drug treatment prior to entry in Job Corps than AODA (16.6% versus 11 .0%). In order to assess the extent of drug involvement of the students immediate social environment, we also considered maternal drug use. A higher percentage of AODA students (15.9%) than DTEP students (10.3%) reported maternal drug use.

The extent of self-reported criminal activities was also examined. As Exhibit D-l indicates, students in DTEP were somewhat more likely than students in the AODA program to have reported ever being involved in criminal activity (77.0% versus 67.2%). The criminal involvement of non-program students was significantly lower than DTEP and AODA students (48.6%). As expected, DTEP and AODA students in the analysis sample were more likely than

Students were classified as current and extensive users if they had used an illicit drug in the last year and if over the last year the student had (i) used drugs an average of at least once a week, or (ii) used drugs all day and all night for at least 2 days, or (iii) suffered an **overdose**, **or** (iv) gone through withdrawal. Because of missing data in some of these elements, the proportion who used drugs as calculated within the scale is slightly different from the simple proportion who never used drugs.

non-program students to be involved in drug sales (19.3%, 15.7%, and 6.5%, respectively). Exhibit D-l also presents the mental health status assessment of the students at the time of entry.

At the time when the students were assessed for intake, and once again at the time of the follow-up survey, students were administered a comprehensive psychological assessment, the Brief Symptom Inventory (BSI). This is an assessment of mental health status with superior psychometric qualities that makes it a valid measure of mental health not only for epidemiological purposes (i.e. to assess the mental health of a group of individuals) but also a valid measure of clinical need of mental health services. The BSI yields measures of nine specific dimensions of mental health, corresponding to three overall mental health indices and six measures of specific diagnoses, all of which are expressed as standardized scores in comparison to a non-clinical sample of youths. The six specific measures are somatization, obsessivecompulsive symptoms, interpersonal sensitivity, depression, anxiety, 'hostility, phobic anxiety, paranoid ideation and psychoticism. A student who had a score over one standard deviation above the mean in any of the six diagnostic dimensions is indicated as distressed in a diagnostic dimension. A student who has a score of 63 or higher in the overall mental illness indicator or scores of 63 or higher in any two of the 6 symptom dimensions is indicated as a clinical case. A student who is not indicated as a case but has an overall mental illness indicator that is over one standard deviation above the mean is indicated as having a high overall level of symptoms.

Almost one-quarter of DTEP, AODA and non-program students are indicated as having mental health problems. About 15% are distressed in at least one diagnostic dimension, about 5% are indicated as a clinical case, and an additional 7% are indicated as having a high overall level of symptoms.

EXHIBIT D-I CHARACTERISTICS OF THE DTEP, AODA, AND NON-PROGRAM STUDENTS AT THE TIME OF ENTRY IN JOB CORP

Characteristics	DTEP	AODA	Non- Program
Mean age of the student at the time of entry into Job Corps	18.3	18.1	18.4
Race and Ethnicity: African American Hispanic	53.8% 23.4%	66.9% 15.0%	57.1% 18.3%
Sender: Male	72.9%	73.8%	57,4%
Educational Level at Entry: Has a high school diploma or GED	13.3%	11.7%	24.9%
Vork History at Entry: Had any legitimate employment during 12 months prior to entry	50.1%	54.7%	53.5%
'amily Background: Lived with both natural or adoptive parents between the ages of 6 and 14	21.8%	18.4%	26.9%
Had a major disruption of family life due to running away from home, being placed in a different home, or being kicked out of the home	48.0%	42.7%	36.1%

EXHIBIT D-1 (Continued) CHARACTERISTICS OF THE DTEP, AODA, AND NON-PROGRAM STUDENTS AT THE TIME OF ENTRY IN JOB CORP Illicit Drug Involvement: Used illicit drugs more than 12 months prior to entry but not more recently (1) 2.2% 2.1% 10.8% Moderate use of illicit drugs 12 months prior to entry: No use of hard drugs and marijuana use less frequently than once a week' 22.4% 27.8% 15.6% Extensive use of illicit drugs 12 months prior to entry: Use of hard drugs and/or marijuana use at least once a week (1) 65.1% 58.9% 11.4% Received drug treatment services prior to entry 11.0% 8.7% 16.6% 10.2% 10.3% 15.9% Mother used drugs Criminal Activity: Ever involved in a criminal activity prior to 77.0% 67.2% 48.6% entry (self-reported) Sold drugs during 12 months preceding entry (self-reported) 19.3% 15.7% 6.5% Mental Health Status: Distressed in one or more diagnostic dimensions (1) 15.1% 14.1% 14.3% Classified as a "case" (1) 4.0% 5.5% 5.2% -7.0% Has a high-overall level of symptoms (1) 6.7% 6.5%

Notes: (1) See text for further detail.

APPENDIX E

TABLES DESCRIBING DTEP EFFECTS AND THE EFFECTS OF CONTROL VARIABLES

EXHIBIT E-I ADDITIVE COEFFICIENTS DESCRIBING DTEP EFFECTS AND THE EFFECTS OF CONTROL VARIABLES ON THE LOG-ODDS OF USING MARIJUANA POST-JOB CORPS TERMINATION

Predictors	Model 1: Unadjusted	Model 2: Adjusted
DTEP ¹	211+	257*
Demographic Controls:		
Age at entry to JC		015
Hispanic*	-	244
NH-Black*		.134
Male		.061
Parent present at age 6-14		147
Prior Work/Education		
HS/GED		.030
Working prior to JC		494*
Prior Drug Use:		
Moderate ³		.785*
Extensive ³	•	1.276*
Other Controls:		
Sold drugs		.250
Prior crimes		.512*
Mother drug use	•	.487*
Exposure ⁴		$4x10^{-3}$
Constant	.399	365

=874

- (1) Statistical significance for DTEP is based on 1-tail test
- (2) Reference category is non-Hispanic white/other
- (3) Reference category is no use in prior 12 months
- (4) Days between termination from Job Corps and follow-up

^{*}p<.05

⁺p<.10

EXHIBIT E-2 ADDITIVE COEFFICIENTS DESCRIBING **DTEP** EFFECTS AND THE EFFECTS OF CONTROL VARIABLES ON THE LOG-ODDS OF USING ANY CRACK OR COCAINE POST-JOB CORPS TERMINATION

Predictors	Model 1: Unadjusted	Model 2: Adjusted
DTEP'	395	570+
Demographic Controls:		
Age at entry to JC		.154
Hispanic ²		,490
NH-Black ²		122
Male		106
Parent present at age 6-14		.571
Prior Work/Education		
HS/GED	•	.172
Working prior to JC	-	945*
Prior Drug Use:		
Moderate ³		045
Extensive ³		.156
Other Controls:		
Sold drugs		1.028*
Prior crimes	-	226
Mother drug use		.524
Exposure ⁴		.002
Constant	-3.164*	-7.044

=869

*p<.05

+p<. 10

- (1) Statistical significance for DTEP is based on 1-tail test
- (2) Reference category is non-Hispanic white/other
- (3) Reference category is no **use** in prior 12 months
- (4) Days between termination from Job Corps and follow-up

EXHIBIT E-3 ADDITIVE COEFFICIENTS DESCRIBING DTEP EFFECTS AND THE EFFECTS OF CONTROL VARIABLES ON THE LOG-ODDS OF ANY ALCOHOL BINGE DRINKING POST-JOB CORPS TERMINATION

Predictors	Model 1: Unadjusted	Model 2: Adjusted
DTEP'	.408+	.267
Demographic Controls:		
Age at entry to JC		.082*
Hispanic*	-	580*
NH-Black*		904*
Male	•	.112
Parent present at age 6-14		142
Prior Work/Education		
HS/GED		.186
Working prior to JC		143
Prior Drug Use:		
Moderate ³		.792*
Extensive ³		.836*
Other Controls:		
Sold drugs		.256
Prior crimes		.376*
Mother drug use		065
Exposure ⁴	•	. 0 0 0
Constant	1.174*	-3.288*

=820

*p<.05

+p<. 10

Statistical significance for DTEP is based on 1 -tail test Notes: (1)

- (2) Reference category is non-Hispanic white/other
- Reference category is no use in prior 12 months
- (3) (4) Days between termination **from** Job **Corps** and follow-up

EXHIBIT E-4 ADDITIVE COEFFICIENTS DESCRIBING DTEP EFFECTS AND THE EFFECTS OF CONTROL VARIABLES ON THE LOG-ODDS OF FREQUENCIES OF USE OF MARIJUANA POST-JOB CORPS TERMINATION

Predictors	0 vs 1	0 vs 2	0 vs 3 ⁴
DTEP'	009	351*	438*
Demographic Controls:			
Age at entry to JC	.085	038	062
Hispanic*	069	118	311
NH-Black*	.049	.313	.033
Male	391+	.123	.328
Parent present at age 6-14	181	032	226
Prior Work/Education:			
HS/GED	239	109	.346
Working prior to JC	432*	507*	551*
Prior Drug Use:			
Moderate ³ ,	1.260*	.528	.605
Extensive ³	1.246*	1.207*	1.423*
Other Controls:			
Sold drugs	.174	.111	.457+
Prior crimes	.253	.630*	.550*
Mother drug use	.374	.201	.804*
Exposure ⁴	.334 x 10"	002*	.205 x 10"
Constant	-3.657*	270	-1.142

[=874

- (1) Statistical significance for DTEP is based on 1 -tail test
- (2) Reference category is non-Hispanic white/other
- (3) Reference category is no use in prior 12 months
- (4) . **Days** between termination **from** Job Corps and follow-up
- (5) Frequencies of use categories are:
 - (0) None, (1) 1-3 per month, (2) 1 per week, (3) daily

^{*}p<.05

⁺p<. 10

EXHIBIT E-5

ADDITIVE COEFFICIENTS DESCRIBING DTEP EFFECTS AND THE EFFECTS OF CONTROL VARIABLES ON THE LOG-ODDS OF ANY ALCOHOL USE POST-JOB CORPS TERMINATION

Predictors	Model 1: Unadjusted	Model 2: Adiusted
DTEP'	128	201
Demographic Controls:		
Age at entry to JC		.099*
Hispanic ²		- 1.082*
NH-Black ²		672*
Male		.009
Parent present at age 6-14		.099
Prior Work/Education:		
HS/GED	, -	.587*
Working prior to JC	-	265+
Prior Drug Use:		
Moderate ³		.916*
Extensive'		.831*
Other Controls:		
Sold drugs		060
Prior crimes		.392*
Mother drug use		.240
Exposure ⁴		001+
Constant	1.174*	306

=820

*p<.05

+p<.10

- (1) Statistical significance for DTEP is based on 1-tail test
- (2) Reference category is non-Hispanic white/other
- (3) Reference category is no use in prior 12 months
- (4) Days between termination from Job Corps and follow-up

EXHIBIT E-6 'ADDITIVE COEFICIENTS DESCRIBING DTEP EFFECTS AND THE EFFECTS OF CONTROL VARIABLES ON THE LOG-ODDS OF USING ANY DRUG POST-JOB CORPS TERMINATION

Predictors	Model 1: Unadjusted	Model 2: Adjusted
DTEP'	169+	218+
Demographic Controls:		
Age at entry to JC		010
Hispanic*		078
NH-Black ²		.150
Male	-	046
Parent present at age 6- 14		165
Prior Work/Education		
HS/GED	-	012
Working prior to JC ·		454*
Prior Drug Use:		
Moderate ³	-	.771*
Extensive ³	-	1.293*
Other Controls:		
Sold drugs		.191
Prior crimes		.529*
Mother drug use		.508*
Exposure ⁴		000
Zonstant	.43 1	524

[-874

*p<.05

+p<.10

- (1) Statistical significance for **DTEP** is **based** on 1-tail test
- (2) Reference category is non-Hispanic white/other
- (3) Reference category is no use in prior 12 months
- (4) Days between termination from Job Corps and follow-up

EXHIBIT E-7 ADDITIVE COEFFICIENTS DESCRIBING DTEP EFFECTS AND THE EFFECTS OF CONTROL VARIABLES ON THE LOG-ODDS OF SPECIFIC DRUG USE STATUS POST-JOB CORPS TERMINATION

Predictors	None vs Low	None vs Moderate	None vs Extensive ⁴
DTEP ¹	.012	278+	445*
Demographic Controls:			
Age at entry to JC	009	039	.027
Hispanic ²	050	095	061
NH-Black ²	.221	.504+	180
Male	320	.441+	.136
Parent present at age 6-14	133	170	164
Prior Work/Education:			
HS/GED	109	.023	.045
Working prior to JC	380+	495*	506*
Prior Drug Use:			
Moderate ³	1.170*	.400	.684
Extensive ³	1.386*	1.003*	1.466*
3ther Controls:			
Sold drugs	063	.145	.382
Prior crimes	.398+	.472*	.756*
Mother drug use	.072	.642*	.731*
Exposure ⁴	285 x 10"	002*	.802 x 10 ⁻³
Constant	-1.615	689	-2.828*

[=**87**1

- Statistical significance for DTEP is based on 1 -tail test (1)
- Reference category is non-Hispanic white/other
- (2) -(**3)** Reference category is no use in prior 12 months
- Days between termination from Job Corps and follow-up
- (4) **(5)** Categories are (0) no use, (1) occasional marijuana use only, (2) moderate marijuana use only, (3) other drug use or high frequency marijuana use

^{*}p<.05

⁺p<.10

ADDITIVE COEFFICIENTS DESCRIBING DTEP EFFECTS AND THE EFFECTS OF CONTROL VARIABLES ON THE LOG-QDDS OF BEING INDICATED AS A CLINICAL CASE WITH RESPECT TO MENTAL HEALTH PROBLEMS ONE YEAR AFTER TERMINATION FROM JOB CORPS

Predictors	Model 1: Unadjusted	Model 2: Adjusted
DTEP'	744*	641*
Demographic Controls:		
Age at entry to JC		.057
Hispanic ²		164
NH-Black ²	-	238
Male		089
Both parents present at ages		102
6-14	~	.183
Major disruption of family life	•	071
Prior Work/Education:		
Having a high school diploma		
or GED at entry		600
Working prior to JC-	•	171
Prior Drug Use:		
Used drugs more.than one year		
prior to entry ³		556
Moderate ³	-	.265
Extensive ³		.514
Ever received drug treatment		449
Other Controls:		
Prior crimes		194
Mother drug use		.602*
Indicated as a "case" at entry		1.009*
Constant	-1.681	-2.881*

N=927, DTEP and AODA students who participated in follow-up only

*p<.05

+p<. 10

- (1) Statistical significance for DTEP is based on 1 -tail test
- (2) Reference category is non-Hispanic white/other
- (3) Reference category is no self reported **drug** use

ADDITIVE COEFFICIENTS DESCRIBING DTEP EFFECTS AND THE EFFECTS OF CONTROL VARIABLES ON THE LOG-ODDS OF BEING BOOKED/ARRESTED/JAILED POST-JOB CORPS TERMINATION

Predictors	Model 1: Unadjusted	Model 2: Adjusted
DTEP'	.084	017
Demographic Controls:		
Age at entry to JC		098*
Hispanic*		173
NH-Black*		.133
Male		1.592*
Parent present at age 6-14	-	303
Prior Work/Education:		
HS/GED		.001
Working prior to JC		254+
Prior Drug Use:		
Moderate ³		150
Extensive ³		.093
Other Controls:		
Sold drugs		.073
Prior crimes		.748*
Mother drug use		268
Exposure ⁴	•	.002*
Constant	697	-1.268

N=931

*p<.05

+p<.10

- (1) Statistical significance for DTEP is based on 1 -tail test
- Reference category is non-Hispanic white/other (2)
- Reference category is no use in prior 12 months
- (3) **(4)** Days between termination from Job Corps and follow-up

ADDITIVE COEFFICIENTS DESCRIBING DTEP EFFECTS AND THE EFFECTS OF CONTROL VARIABLES ON THE LOG-ODDS OF SELLING OR AIDING IN THE SELLING OF DRUGS POST-JOB CORPS TERMINATION

Predictors	Model 1: Unadjusted	Model 2: Adjusted
DTEP'	308*	377*
Demographic Controls:		
Age at entry to JC		045
Hispanic ²		.044
NH-Black ²		.290
Male	-	.976*
Parent present at age 6-14		407+
Prior Work/Education:		
HS/GED	. ■	.017
Working prior to JC		212
Prior Drug Use:		
Moderate ³		.163
Extensive ³		049
Other Controls:		
Sold drugs	-	.445*
Prior crimes		.649*
Mother drug use		.260
Exposure ⁴		.002*
Constant	996	-2.485*

=870

+p<. 10

- (1) Statistical significance for DTEP is based on 1 -tail test
- (2) Reference category is non-Hispanic white/other
- Reference category is no use in prior 12 months
- (4) ... Days between termination from Job Corps and follow-up

^{*}p<.05

ADDITIVE COEFFICIENTS DESCRIBING DTEP EFFECTS AND THE EFFECTS OF CONTROL VARIABLES ON THE LOG-ODDS OF REPORTING ANY CRIMINAL OFFENSE POST-JOB CORPS TERMINATION

Predictors	Model 1: Unadjusted	Model 2: Adjusted
DTEP'	043	- .05 1
Demographic Controls:		
Age at entry to JC		114*
Hispanic ²		040
NH-Black*	•	.220
Male		.561*
Parent present at age 6-14	•	325+
Prior Work/Education:		
HS/GED	-	221
Working prior to JC	-	022
Prior Drug Use:		
Moderate 3 -		.207
Extensive ³		.240
Other Controls:		
Sold drugs		.299
Prior crimes	-	.810*
Mother drug use		.101
Exposure ⁴	-	001
Constant	.378*	1.586+

N=844

*p<.05

+p<. 10

- (1) Statistical significance for DTEP is based on 1 -tail test
- (2) Reference category is non-Hispanic white/other
- (3) Reference category is no use in prior 12 months
- (4) Days between termination **from** Job Corps and follow-up

ADDITIVE COEFFICIENTS DESCRIBING DTEP EFFECTS AND THE EFFECTS OF CONTROL VARIABLES ON THE LOG-ODDS OF BEING SUCCESSFULLY PLACED IN HIGHER EDUCATION, JOB OR MILITARY, AFTER TERMINATION FROM JOB CORPS

Predictors	Model 1: Unadjusted	Model 2: Adjusted
Drug treatment program participation DTEP ¹	135+ 248*	130 075
DTEP among students with mental health problems ⁴	•	.266*
Centers ⁵ Gainesville ⁶	_	.235+
Potomac ⁶	-	.744*
San Diego ⁶		1.022'
Oneonta ⁷		.330*
Sacramento'		1.183* 1.023*
Woodstock' Knoxville'	-	.478*
Demographic Controls: Age at entry to JC		018
Hispanic'	-	.081
NH-Black ²		068
Male	•	.246 * .133+
Both parents present at ages 6- 14 Major disruption of family life	•	061
Prior Work/Education:		
Having a high school diploma or GED at		
entry Working prior to JC	-	.528 * .394 *
Prior Drug Use:		
Used drugs more than one year prior to		
entry ³	-	.294*
Moderate ³		138
Extensive'	-	213*
Ever received drug treatment	•	.124
Other Controls:		
Prior crimes	` -	.179
Mother drug use Indicated as a "case" at entry	-	013 013
Local area unemployment rate	•	-8.320*
Constant	.932	.880

=5,740

*p<.05

+p<.10

- (1) Statistical significance for DTEP is based on 1 -tail test
- (2) Reference category is non-Hispanic white/other
- Reference category is no self reported drug use
- (4) Interaction effect of DTEP and mental health status
- (5) Reference category is Delaware Valley (demonstration center)
- (6) Demonstration center
- (7) Control center

ADDITIVE COEFFICIENTS DESCRIBING DTEP EFFECTS AND THE EFFECTS OF CONTROL VARIABLES ON THE FIRST WAGES AFTER TERMINATION FROM JOB CORPS

Predictors	Model 1: Unadjusted	Model 2: Adjusted
Drug treatment program participation DTEP ¹	083 .213*	174+ .080
Centers ⁴		
Gainesville ⁵	-	.183
Potomac ⁵		.488*
San Diego'	•	1.248*
Oneonta ⁶		.416*
Sacramento ⁶ Woodstock ⁶	•	2.014 * .678 *
Knoxville ⁶	•	.293
Kiloxville		
Demographic Controls:		
Age at entry to JC		.071*
Hispanic ²		.224*
NH-Black'		.019
Male	•	.806*
Both parents present at ages 6- 14 Major disruption of family life		,074 158*
Prior Work/Education: Having a high school diploma or GED at entry Working prior to JC	• •	.831* .623*
Prior Drug Use: Used drugs more than one year prior to entry'		046
Moderate'		030
Extensive'		192+
Ever received drug treatment		026
Other Controls: Effects due to selection into job placement	-1.114*	2.798*
Prior crimes	•	042
Mother drug use	-	012
Indicated as a "case" at entry	•	028
Local area unemployment rate	- -	-16.543* .053*
Local area wage rate	-	.UJ3*
Constant	6.281"	1.241

N=3,067, students placed in a job only

*p<.05

+p<. 10

- (1) Statistical significance for DTBP is based on 1-tail test
- (2) **(3)**
- Reference category is non-Hispanic white/other
 Reference category is no self reported drug use
 Reference category is Delaware Valley (demonstration center)
- (4) **(5)** Demonstration center
- Control center (6)

ADDITIVE COEFFICIENTS DESCRIBING DTEP EFFECTS AND THE EFFECTS OF CONTROL VARIABLES ON THE LOG-ODDS OF BEING CURRENTLY EMPLOYED AT TIME OF INTERVIEW

Predictors	Model 1: Unadjusted	Model 2: Adjusted
DTEP'	.065	004
Demographic Controls:		
Age at entry to JC		.159*
Hispanic ²		554*
NH-Black ²		684*
Male		.011
Parent present at age 6-14		.166
Prior Work/Education:		
HS/GED		.287
Working prior to JC		.349*
Prior Drug Use:		
Moderate ³ .		221
Extensive ³		.121
Other Controls:		
Avg. Wage		-1.8 x 10 ⁻⁵
Unemployment rate		-3.978+
Prior crimes		224
Exposure ⁴		-2.4 x 10"
Constant	536*	-2.181*

N=834

*p<.05

+p<.10

- (1) Statistical significance for DTEP is based on 1 -tail test
- (2) Reference category is non-Hispanic white/other
- (3) Reference category is no use in prior 12 months
- (4) Days between termination from Job Corps and follow-up

ADDITIVE'COEFFICIENTS DESCRIBING DTEP EFFECTS AND THE EFFECTS OF CONTROL VARIABLES ON THE LOG-ODDS OF HAVING EVER BEEN EMPLOYED SINCE JOB CORPS TERMINATION

Predictors	Model 1: Unadjusted	Model 2: Adjusted
DTEP ¹	.228+	.112
Demographic Controls:		
Age at entry to JC		.157*
Hispanic ²		653+
NH-Black ²		-1.236*
Male		159
Parent present at age 6-14	•	.301
Prior Work/Education:		
HS/GED	.	.221
Working prior to JC		.424
Prior Drug Use:		
Moderate 3 F	-	068
Extensive ³		168
Other Controls:		
Avg. Wage	•	-2.3 x 10 ⁻⁵ +
Unemployment rate		-5.715*
Prior crimes	u	.327+
Exposure ⁴		.002*
Constant	1.176*	726

=834

*p<.05

+p<.10

- (1) Statistical significance for DTEP is based on 1 -tail test
- (2) Reference category is non-Hispanic white/other
- (3) Reference category is no use in prior 12 months
- (4) Days between termination from Job Corps and follow-up

EXHIBIT El6

MULTIPLE REGRESSION COEFFICIENTS DESCRIBING DTEP EFFECTS AND THE EFFECTS OF CONTROL VARIABLES ON TOTAL EARNINGS ONE YEAR POST-JOB CORPS TERMINATION

Predictors	Model 1: Unadjusted	Model 2: Adjusted
DTEP'	233.83	68.45
Demographic Controls:		
Age at entry to JC		501.79*
Hispanic ²		-1276.84*
NH-Black ²		-2189.64*
Male		975.42*
Parent present at age 6-14	-	613.31
Prior Work/Education:		
HS/GED		348.26
Working prior to JC	-	1121.89*
Prior Drug Use:		
Moderate ³		58.19
Extensive ³		230.16
Other Controls:		
Avg. Wage		.02
Unemployment rate		-16304.45*
Prior crimes		-45.29
Constant	3749.17	-4675.89*

=815

*p<.05

+p<.10

- (1) Statistical significance for DTEP is based on 1 -tail test
- Reference category is non-Hispanic white/other
- (2) (3) Reference category is no use in prior 12 months

EXHIBIT E.17. ADDITIVE COEFFICIENTS **DESCRIBING** DTEP EFFECTS AND **THE** EFFECTS OF CONTROL VARIABLES ON THE LOG-ODDS OF USING WELFARE POST-JOB CORP TERMINATION

Predictors	Model 1: Unadjusted	Model 2: Adjusted
DTEP'	144	349*
Demographic Controls:		
Age at entry to JC		.092*
Hispanic'		.196
NH-Black*		.316
Male	•	-1.970*
Parent present at age 6-14		043
Prior Work/Education		
HS/GED		202
Working prior to JC		318*
Prior Drug Use:		
Moderate ³		514
Extensive ³	-	280
Other Controls:		
Average wage	-	-2.5 x 10 ⁻⁶
Unemployment rate		9.354*
Prior crimes		.372*
Exposure⁴	-	001
Constant	579	924

=920

*p<.05

+p<.10

- (1) Statistical significance for DTEP is based on 1 -tail test
- (2) Reference category is non-Hispanic white/other
- (3) Reference category is no use in prior 12 months
- (4) Days between termination from Job Corps and follow-up

APPENDIX F

EFFECTS OF DTEP ON THE EDUCATIONAL AND VOCATIONAL OUTCOMES OF THE JOB CORPS PROGRAM

APPENDIX F EFFECTS OF DTEP ON THE EDUCATIONAL AND VOCATIONAL OUTCOMES OF THE JOB CORPS PROGRAM

This Appendix presents the results of the analyses addressing the educational and vocational impacts of DTEP. Three measures of educational and vocational achievements while in the Job Corps program were obtained from the management information system of the Job Corps. These three measures are:

- GED or high school degree attainment
- · Learning gains in reading and mathematics
- · Completion of a vocational training program.

1. EFFECTS OF DTEP ON RATES OF DROPOUT AND THE DURATION OF STAY IN THE JOB CORPS PROGRAM

An important predictor of educational and vocational achievement in Job Corps is the duration of stay in the program. Early dropout from the Job Corps program prevents the students from obtaining any further benefits. Hence an analysis of the impact of DTEP on the duration of stay in Job Corps is informative. The following four sections of this Appendix presents the results of the analyses that estimated the impact of DTEP on duration of stay in Job Corps and the three outcomes listed above, relative to the AODA students. Since all of these outcome measures are available for all enrollees in the study centers, the analyses are not restricted to the students who responded to the follow-up. The detailed findings of the analyses can be found in the Exhibits attached to this Appendix.

EXHIBIT F-I EFFECTS OF DTEP ON RATES OF DROPOUT AND THE DURATION OF STAY IN THE JOB CORPS PROGRAM MAIN FINDINGS

- The differences between the rates of dropout of DTEP versus AODA students are small.
- DTEP students. have significantly lower rates of **dropout** (by 17%) during the second month of their stay in the Job Corps program than comparable AODA students.
- The overall impact of **the** differences between the rates of dropout of DTEP and AODA students is very small and statistically not significant.

1.1 Measuring Duration of Stay

Duration of stay in the Job Corps program is an important indicator of the likely benefits that a student may gain from this program. To the extent that DTEP may help retain the students in the Job Corps program, it may enhance their educational and vocational benefits as well. It is known that drug using students have shorter durations of stay in Job Corps than non drug using students. The duration of stay is measured as the total number of days that the student received pay as a Job Corps participant. This measure provides the total number of days when the student was actively participating in Job Corps, and does not include the number of days that may have been spent on leave. Hence, this measure is closely associated with the expected benefits of the Job Corps program, such as educational and vocational gains, and the development of 'social skills.

DTEP is expected to help retain the students in the Job Corps program by providing educational and recreational support and by providing peer support through the peer group counseling sessions. To the extent that a DTEP student can be integrated into the Job Corps program through these program components, he or she is expected to have a lower likelihood of dropout.

1.2 Statistical Methods of Analysis

In order to estimate the unique effects of DTEP on dropout rates, multivariate models of rates of dropout were estimated. Models were estimated that posit that the rate of terminating from Job Corps at each duration (day on pay), given that one was still in Job Corps on the previous day, will depend on the total duration spent in Job Corps until that time, and the effects of various center, program and individual characteristics. The effects of duration of stay on the rate of termination was specified in such a way that minimal assumptions regarding the exact nature of duration of dependence were imposed.

1 This model was estimated using maximum likelihood and by implementing an iterative numerical maximization algorithm.

The model of rates of termination controlled the effects of the following variables in addition to duration and program effects: Age at the time of entry, gender, race and ethnicity of the student, whether the student has a high school diploma or a GED at the time of entry, whether the student worked during the 12-month period preceding entry into Job Corps, self reported

A piecewise exponential hazard rate model was implemented where the time periods in which the hazard rate is assumed constant are O-29 days, 60-89 days, 90-149 days, 150-239 days and 240 days or more.

use status of the student at the time of entry, whether the student ever received drug treatment prior to entry in Job Corps, whether the student ever committed a criminal act prior to entry into Job Corps, and whether the student lived with two parents during childhood (see Appendix D).

1.3 Effects of DTEP

Exhibit F-2 provides the standardized percentages of DTEP and AODA students expected to be in the Job Corps program at 30 days, 60 days, and 90 pay days. The DTEP/AODA differences in the percentages who are still in Job Corps are small and not significant. The rate of dropout among DTEP students during the second month of stay (3 l-60 days) is significantly lower than that for the AODA students. However, the magnitude of this effect is rather small (17%) and its impact on the expected duration of stay in Job Corps by DTEP and AODA students is negligible.

EXHIBIT F-2 THE STANDARDIZED PERCENTAGES OF DTEP AND AODA STUDENTS WHO REMAIN IN THE JOB CORPS PROGRAM AT 30, 60 AND 90 DAYS OF DURATION			
	30 Days	60 Days	90 Days
Standardized percentage of DTEP students who remain'in the Job Corps program	88.1%	74.3%	59.9%
Standardized percentage of AODA students who remain in the Job Corps program	90.0%	73.2%	59 5%

1.4 Other Significant Findings

- Age at the time of enrollment and Hispanic ethnicity is positively associated with the duration of stay.
- Having a GED or high school degree at the time of entry is positively associated with the duration of stay.
- Students who self-report extensive drug use have significantly lower durations of stay in Job Corps.
- Students with elevated levels of mental health problems have significantly lower durations of stay in Job Corps.

2. EFFECTS OF DTEP ON GED ATTAINMENT

GED or high school diploma attainment is an important educational outcome because of its strong link to employment and earnings. Although Job Corps focuses on vocational education, its basic education component targets the students who do not have a high school degree or a GED at the time when they enroll in Job Corps. DTEP also has a basic education component, directed by the education specialist. Hence, DTEP is expected to have direct and indirect effects on the in-program educational achievement of its participants: First, through the educational component of DTEP, DTEP students received tutoring services that were not available to the AODA students. Hence, they are expected to have improved educational outcomes. Second, through the use of support services that targeted the reduction of substance use and improvement of overall mental health, the DTEP students are expected to be able to benefit from the basic Job Corps program better than the AODA students.

EXHIBIT F-3 EFFECTS OF DTEP ON GED ATTAINMENT MAIN FINDINGS

- About one-quarter of DTEP and AODA students receive a GED or a high school degree while in Job Corps.
- The difference between the rates of **GED** or high school diploma attainment of DTEP and AODA students is **very small** and **statistically** not significant.

2.1 Statistical Methods of Analysis

Whether the student obtained a GED or a high school diploma while in Job Corps is one of the educational outcome measures available **from** Job Corps databases. A very small proportion of the students who were eligible for a GED or high school diploma, had not yet terminated by January of 1996, when the data from the Job Corps databases were extracted (less than 2%). The GED attainment of these students is unknown and they were excluded from the analysis.

In order to estimate the unique effects of DTEP on GED attainment multivariate logistic regression models were estimated, that assess the impacts of DTEP participation and other characteristics on the probability of GED attainment among the students who are eligible. Students who do not have a GED at the time of entry in Job Corps, and the students whose basic education level is adequately high (more than a grade level equivalent of 8.5 years) are eligible to obtain a GED. These models were estimated using maximum likelihood and by numerical

optimization. The estimated coefficients of these models were used to calculate the standardized percentages of DTEP and AODA students who obtained a GED or a high school diploma while in Job Corps. These percentages are comparable because they adjust for the compositional differences between the DTEP and AODA students.

The following student characteristics were included in the model of GED attainment as predictors: Age at the time of entry, gender, race and ethnicity of the student, whether the student worked during the 12 month period preceding entry into Job Corps, self reported drug use status of the student at the time of entry, whether the student's mother used drugs, whether the student ever received drug treatment prior to entry in Job Corps, whether the student ever committed a criminal act prior to entry into Job Corps, whether the student lived with two parents during childhood, and, whether the student experienced a major disruption of family life (see Appendix E).

2.2 Effects of DTEP

Exhibit F-4 provides the standardized percentages of DTEP and AODA students who obtained a GED or a high school diploma while in Job Corps, among those who had not completed secondary education at the time of entry. The DTEP/AODA difference in the percentages who obtained a high school degree is very small and not significant. Approximately one-quarter of the DTEP and AODA students achieve a GED or a high school diploma while in Job Corps.

EXHIBIT F-4 STANDARDIZED PERCENTAGES OF DTEP AND AODA STUDENTS WHO OBTAINED A GED OR A HIGH SCHOOL DIPLOMA WHILE IN JOB CORP	
Standardized percentage of DTEP students who obtained a GED or a high school degree	25.2%
Standardized percentage of AODA students who obtained a GED or a high school degree	24.2% '

2.3 Other Significant Findings

- Age at the time of enrollment is positively associated with GED attainment.
 - African American students are significantly less likely to obtain a GED.

- Students who worked during the year preceding entry into Job Corps are more likely to obtain a GED or high school degree.
- Students who self-report criminal involvement are more likely to obtain a GED while in Job Corps.
- Students with elevated levels of mental health problems have significantly lower likelihood of obtaining a GED while in Job Corps.

3. EFFECTS OF DTEP ON LEARNING GAINS IN READING AND MATHEMATICS

Although GED or high school diploma attainment is an important basic education goal, some students enter Job Corps at levels of basic education that are too low to attain this goal. For these students, significant learning gains is a goal. DTEP supports basic education activities by its education specialist. Hence, DTEP is expected to have direct and indirect effects on the inprogram learning gains of its participants through the tutoring services that were made available to the DTEP students and through the use of general support services that targeted the reduction of substance use and improvement of overall mental health, which may promote the ability of the students to benefit more **from** the basic education program in Job Corps.

EXHIBIT F-5 EFFECTS OF DTEP ON LEARNING GAINS IN READING AND MATHEMATICS MAIN FINDINGS

- The differences between DTEP and AODA students in the percentage of students attaining one grade level of learning gains in reading is very small and not significant.
- AODA students have a significantly higher level of learning gains in mathematics than DTEP students.

3.1 **Measuring Learning Gains**

We measure learning gains in Job Corps by the grade-level equivalent scores obtained from the Tests of Adult Basic Education (TABE). Total reading and total mathematics scores are considered. All students who score at grade-level equivalents below 8.5 receive subsequent tests about every 90 days for as long as they participate in academic classes. Several caveats of using these scores must be noted. First, only a selected group of students, i.e., students whose scores were under 8.5, receive post tests. Second, a substantial proportion of students (about 35%) who are eligible to receive a post test do not receive one mostly because their stays in Job Corps are

too short. Third, students who remain in the Job Corps program longer, potentially receive multiple post tests, increasing their chances of improving their learning gains. Because of these three factors, the measures of learning gains are available only on a selected subgroup of students and their availability as well as their magnitude are strongly associated with the length of stay in Job Corps. The learning gains are categorized into three groups: Having a learning gain of less than one grade level, having a learning gain of one grade level or higher, and not receiving a post-test (most likely because of a short duration of stay).

3.2 Statistical Methods of Analysis

The three-category measures of learning gains in reading and mathematics were analyzed using multivariate multinomial logistic regression models. The three possible outcomes of the learning gains (gain not exceeding one grade level, at least one grade level gain, no-posttest) were modeled simultaneously to avoid possible biases which may arise because the characteristics that predict no **posttest** may also affect the outcome of interest (learning gains). The multinomial multivariate logistic regression models were estimated using maximum likelihood and by numerical optimization. Standardized percentages of DTEP and AODA students who achieved a grade level or more learning gains were estimated using the coefficient estimates of the multinoniial logistic regression models.

The following student characteristics were included in the models of learning gains: Age at the time of entry, gender, race and ethnicity of the student, whether the student worked during the 12 month period preceding entry into Job Corps, self reported drug use status of the student at the time of entry, whether the student's mother used drugs, whether the student ever received drug treatment prior to entry in Job Corps, whether the student ever committed a criminal act prior to entry into Job Corps, whether the student lived with two parents during childhood, and, whether the student experienced a major disruption of family life (see Appendix D).

3.3 Effects of DTEP

Exhibit F-6 provides the standardized percentages of DTEP and AODA students who achieved learning gains of one grade level or more while in Job Corps, among those who had not achieved a grade level of 8.5 years at the time of entry. The difference between DTEP and AODA students in the percentages of students attaining one grade level of learning gains in reading is very small and not significant. Approximately one-third of the DTEP and AODA students achieve reading gains of one grade level while in Job Corps.

The difference between DTEP and AODA students in mathematics gains is significant but in favor the AODA students. About one-third of DTEP students and 37% of AODA students are expected to attain learning gains of one grade level or more in mathematics, if DTEP and AODA students had identical background characteristics at the time of entry.

EXHIBIT F-6 STANDARDIZED PERCENTAGES OF DTEP AND AODA STUDENTS WHO ACHIEVED LEARNING GAINS OF ONE GRADE LEVEL OR MORE IN READING AND MATHEMATICS WHILE IN JOB CORPS		
Standardized percentage of DTEP students who achieved learning gains of one grade level or more in reading	31.2%	
Standardized percentage of DTEP students who achieved learning gains of one grade level or more in mathematics	32.9%	
Standardized percentage of AODA students who achieved learning gains of one grade level or more in reading	32.8%	
Standardized percentage of AODA students who achieved learning gains of one grade level or more in mathematics	36.6%	

3.4 Other Significant Findings

- Age at the time of enrollment ispositively associated with mathematics gains.
- African American students are significantly less likely to obtain substantial reading or mathematics gains.
- Hispanic students are less likely to obtain substantial gains in mathematics.
- Students who come from disrupted families are less likely to obtain substantial reading or mathematics gains.

4. EFFECTS OF DTEP ON THE COMPLETION OF VOCATIONAL TRAINING

One of the most important goals of Job Corps is to provide the students with vocational training that will translate into better employment opportunities. All students who remain in Job Corps 30 days or longer enroll in vocational training. DTEP is not expected to have direct effects on vocational training outcomes. However, to the extent that **DTEP** enhances the

students' overall well-being and adjustment to Job Corps, it will promote a higher rate of **completion** of vocational training.

EXHIBIT F-7 EFFECTS OF DTEP ON COMPLETION OF VOCATIONAL TRAINING MAIN FINDINGS

- The difference between DTEP and AODA students in the percentages of students who completed vocational training is not significant.
- About one-quarter of DTEP and AODA students completed training while in Job Corps.

4.1 Statistical Methods of Analysis

Similar to GED attainment, vocational completion **can** be analyzed using a logistic regression model that estimates the effects of student characteristics and program participation on the probability of completing vocational training.

The following student characteristics were included in the model of vocational completion: Age at the time of entry, gender, race and ethnicity of the student, whether the student had a GED or a high school diploma at the time of entry, whether the student worked during the 12 month period preceding entry into Job Corps, self reported drug use status of the student at the time of entry, whether the student's mother used drugs, whether the student ever received drug treatment prior to entry in Job Corps, whether the student ever committed a criminal act prior to entry into Job Corps, whether the student lived with two parents during childhood, and, whether the student experienced a major disruption of family life (see Appendix D). In addition, seven indicators were included in these logistic regression models that indicated if the student enrolled in one of the following vocational programs: clerical occupations, health occupations, carpentry, building maintenance, food service occupations, sales occupations, or painting apprentice program.

4.2 Effects of DTEP

Exhibit F-8 provides the standardized percentages of DTEP and AODA students who completed vocational training programs in Job Corps. The difference between DTEP and AODA students in the percentages of students who completed vocational training is not significant. About one-quarter of the DTEP and AODA students completed vocational training while in Job Corps.

EXHIBIT F-8 THE STANDARDIZED PERCENTAGES OF DTEP AND AODA STUDENTS WHO COMPLETED VOCATIONAL TRAINING WHILE IN JOB CORPS	
Standardized percentage of DTEP students who completed vocational training	27.1%
Standardized percentage of AODA students who completed vocational training	28.8%

4.3 Other Significant Findings

- Age at the time of enrollment is positively associated with vocational completion.
- African American students are less likely to complete vocational training.
- Students who lived with both parents during childhood are more likely to complete vocational training.
- Students who had a GED or a high school degree and students who worked prior to entry in Job Corps are more likely to complete vocational training.
- Students who were extensive drug users and students with elevated levels of mental health problems at the time of entry in Job Corps are less likely to complete vocational training.
- Students who enroll in programs for clerical, health, carpentry, building maintenance, food service and sales occupations are more likely to complete vocational training than students who enroll in other programs.

ADDITIVE COEFFICIENTS DESCRIBING DTEP EFFECTS AND THE EFFECTS OF CONTROL VARIABLES ON THE LOGARITHM OF DURATION OF STAY IN JOB CORPS

Predictors	Model 1: Unadjusted⁴	Model 2: Adjusted ⁴
Drug treatment program participation O-29 days 30+ days	.025	.125 244*
DTEP' O-29 days 30-59 days 60-89 days	165 .205* 006	180 .184* 029
90+ days	067	094
Demographic Controls: Age at entry to JC Hispanic' NH-Black' Male Both parents present at ages 6-14		.036* .100* 022 .053 .038
Prior Work/Education: Having a high school diploma or GED at entry Working prior to JC		.121* .012
Prior Drug Use: Used drugs more than one year prior to entry3 Moderate ³ Extensive ³ Ever received drug treatment		050 047 137* 009
Other Controls: Prior crimes Indicated as a "case" at entry		029 039*
Constant	5.604*	4.925*

N=5,577

*p<.05

+p<.10

- (1) Statistical significance for DTEP is based on 1-tail test
- (2) Reference category is non-Hispanic white/other
- (3) Reference category is no self reported drug use
- Baseline duration effects for the unadjusted model are: -.299, -.302, -.05 1, -.037, -.520 for the months 2,3,4-5,6-7 and 8+, respectively. Baseline duration effects for the adjusted model are: -.303, -.3 11, -.066, -.059, -.557 for the months 2,3,4-5,6-7 and 8+, respectively

ADDITIVE COEFFICIENTS DESCRIBING DTEP EFFECTS AND THE EFFECTS OF CONTROL VARIABLES ON THE LOG-ODDS OF OBTAINING A GED OR A HIGH SCHOOL DIPLOMA WHILE IN JOB CORPS

Predictors	Model 1: Unadjusted	Model 2: Adjusted
Drug treatment program	-054	21/4
participation	285*	316*
DTEP'	.144	.056
Demographic Controls:		
Age at entry to JC		.073*
Hispanic ²		182
NH-Black ²		572*
Male		046
Both parents present at ages 6-		
14		.022
Major disruption of family life		.139
Prior Work/Education:		
Working prior to JC .	-	.351*
Prior Drug Use:		
Used drugs more than one year		
prior to entry ³		009
Moderate ³	•	.085
Extensive ³	-	.022
Ever received drug treatment		020
Other Controls:		
Prior crimes		.206*
Mother drug use	. -	.099
Mental health problems		088*
Constant	938*	-2.193*

N=4,534

*p<.05

+**p<.** 10

Notes: (1)

(1) Statistical significance for DTEP is based on l-tail test

- (2) Reference category is non-Hispanic white/other
- (3) Reference category is no self reported dtug use

ADDITIVE'COEFFICIENTS DESCRIBING DTEP EFFECTS AND THE EFFECTS OF CONTROL VARIABLES ON THE LOG-ODDS OF ACHIEVING LEARNING GAINS OF ONE GRADE LEVEL OR MORE IN READING, WHILE IN JOB CORPS

Predictors	Model 1: Unadjusted	Model 2: Adjusted
Drug treatment program participation	121	.009
DTEP'	047	088
Demographic Controls: Age at entry to JC Hispanic ² NH-Black ² Male Both parents present at ages 6- 14	- -	.038 .044 239+ 031 .209+ 023
Major disruption of family life Prior Work/Education: Working prior to JC -	•	.020
Prior Drug Use: Used drugs more.than one year prior to entry ³ Moderate ³ Extensive ³ Ever received drug treatment		.115 .042 171 100
Other Controls: Prior crimes Mother drug use Mental health problems	.	.044 .196 .081
Constant	.410*	254

N=3,299, students who were below 8.5 grade level at entry.

- (1) Statistical significance for **DTEP** is based on 1-tail test
- (2) Reference category is non-Hispanic white/other
- (3) Reference category is no self reported **drug** use

^{*}p<.05

⁺p<.10

ADDITIVE COEFFICIENTS DESCRIBING DTEP EFFECTS AND THE EFFECTS OF CONTROL VARIABLES ON THE LOG-ODDS OF ACHIEVING LEARNING GAINS OF ONE GRADE LEVEL OR MORE IN MATHEMATICS, WHILE IN JOB CORPS

Predictors	Model 1: Unadjusted	Model 2: Adjusted
Drug treatment program participation	073	061
DTEP ¹	320*	375*
Demographic Controls: Age at entry to JC Hispanic ² NH-Black' Male Both parents present at ages 6- 14 Major disruption of family life		.081*305*460*103
Prior Work/Education: . Working prior to JC		.121
Prior Drug Use: Used drugs more than one year prior to entry ³ Moderate ³ Extensive ³ Ever received drug treatment	•	.005 .185 .169 142
Other Controls: Prior crimes Mother drug use Mental health problems	- -	.029 .042 016
Constant	.766	356

^{=4,149,} students who were below 8.5 grade level at entry.

- (1) Statistical significance for DTEP is based on 1-tail test
- (2) Reference category is non-Hispanic white/other
- (3) Reference category is no self reported drug use

^{*}p<.05

⁺p<. 10

ADDITIVE COEFFICIENTS DESCRIBING DTEP EFFECTS AND THE EFFECTS OF CONTROL VARIABLES ON THE LOG-ODDS OF COMPLETING VOCATIONAL TRAINING WHILE IN JOB CORPS

Predictors	Model 1: Unadjusted	Model 2: Adjusted
Orug treatment program participation	493*	282*
OTEP ¹	102	085
Demographic Controls: Age at entry to JC Hispanic' NH-Black* Male Both parents present at ages 6-14 Major disruption of family life	- -	.104* ,055 166* .051 .136* 086
Prior Work/Education: Having a high school diploma or GED at entry Working prior to JC	- -	.600* .178*
rior Drug Use: Used drugs more than one year prior to entry³ Moderate³ Extensive³ Ever received drug treatment	• •	137 035 260 .101
Other Controls: Prior crimes Mother drug use Mental health problems	-	002 .107 089*
Clerical occupations Health occupations Carpentry Building maintenance Food service occupations Sales occupations	- - -	.183* .329* 453* .632* .551* .465*
Painting apprentice Constant	346	.205

N=5,725

*p<.05

+p<.10

- (1) Statistical significance for DTEP is based on 1-tail test
- (2) Reference category is non-Hispanic white/other
- (3) Reference category is no self reported drug use(4) Reference category is other vocational programs